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THE REWARD OF THE PROFESSION.

Abstract of an Address given before the North Central Illinois Medical Association December, 6, 1904.

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In the introduction to his Comedie Humaine Balzac compares the study of the different sorts of humanity to the study of the different species of animals, which in his time had just begun to attract attention. Thus, he insists that the farmer, the merchant, the priest, the lawyer, the navigator, the public officer, the nurse, the housewife, the washerwoman, the courtesan, differ as widely from one another as the tiger, the lion, the lynx, the elephant, the deer, the crocodile, and the boaconstrictor, and that these differences are even more marked because the manifestations of any man may be infinitely modified by the social family life which may result by his union with the female of one of the other groups. If he is himself a bear-like man, his life will be quite different is he married to a tiger or to a crocodile-like woman.

We learn from Balzac that the ethics, the philosophy and the emoluments of each social group are as different from each other as, even more different than, the life of the tiger in the jungle is different from the life of the hog in the stye. It is easy to multiply examples which show the effect of environment upon the philosophy and the ethics of any social group. Let us take for example the bankers. These highly specialized members of society are much devoted to figures, to times and seasons, to small but sure per centages. With them the greatest crime is a failure to meet a date, and although the material which they handle is largely without use value, exchange value is uppermost in their philosophy. Their principal question is "How much would it bring?" As for human sentiment, human misery or happiness, human love or hate, human growth or starvation, these are matters of which they take no account. They look upon themselves and their occupations as unchangeable, inexorable and infallible.

How different is the philosophy of the farmer. He possesses a piece of earth. To him it is a God-given possession and a title of nobility. He scatters upon his land in the sure confidence that rain and sunshine will bring him returns, not in small per centages, but in hundred or thousand fold. Nowhere else is there such individual and isolated independence. Until the days of modern specialization the farm was a kingdom in itself. Well do I remember that independence on my father's farm, where we raised every domestic animal and every farm product. We built our wagons and sleighs; we constructed our own farm buildings, the tubs for our butter, and the barrels for our maple syrup. Out of the tanned hides of our own animals we made harnesses to put on their backs and boots and shoes for our feet. Out of the wool and flax from our farm we made our own clothes and furnished our beds. The farmer sees in the products of his soil not only the fluctuating exchange value which the banker recognizes in his money, but a use value, which is constant and unchangeable. He sells his grain or his cattle with the full assurance that he is conveying something quite as valuable to human life and happiness as the machinery, clothing or furniture which he gets in return.

The priest stands in a position far removed from the banker or the farmer. He deals in intangible sentiments alone; he receives the burden of human hope, aspiration, agony, despair and terror, and by the machanations of his philosophy turns them into resignation, ecstacy, self-restraint and hope. He sees and feels the use value of the intangible

sentiments of mankind, and he alone of all the social units secures an exchange value from them in the market place of human life.

In the social menagerie no one occupies so enviable and conspicuous a place from the standpoint of usefulness and possible happiness as the good doctor. Without despising the use value of the intangible and unexploited sentiments of mankind, he renders a personal service often of the most inestimable value. His position is one which grows more and more intimate with the life of each and every social group. In his collective influence, by means of societies, legislative committees and advisory boards, the good doctor has added more to the efficiency of human life and the possibilities of human happiness than any other social group, not excepting the great army of mechanical engineers and inventors. If the latter group has increased the efficiency of human energy by enslaving the very vitals of the earth, its coal and oil, its lakes, rivers and springs, the medical profession has removed from civilized life the terror of smallpox, which formerly destroyed one in fourteen out of each community, and defaced and disfigured, crippled and diseased, three-fourths of the remainder; it has stayed the ravages of typhoid and malaria; it has corralled and may yet destroy the dreaded yellow fever; it has overcome the terror of diphtheria, and marked out the dangers and limitations and possibilities of a successful warfare on the great White Plague, Tuberculosis. It has robbed injuries, gunshot wounds and operation wounds of the dangers of blood poisoning, and has even added some humanity and comfort to inhuman war. It has made the cosmetic and hygienic offices of the dentist possible, and has robbed childbirth and the operating room of most of their agonies. These great contributions to human resources and happiness are the product of less than a hundred and fifty years of professional, scientific activity, and yet the end is not in sight. There stands before the good doctor, whether in the inspiring surroundings of the largest communities, or in the isolated quiet of a rural district, so conducive to concentration and intensity of purpose, problems without number which he may solve, which he must solve, for the advancement of civilization and the peace of his own mind and soul.

In modern civilized life there is only one unpardonable sin, and that is economic insufficiency. However useful a man may be, however successful in rendering a service inestimable and uncriticisable to any number of the community in which he lives, if he fails to pay his taxes, his rent, his grocer, or his tailor, he has committed the unpardonable economic sin. Hence it follows that the compensation of the doctor is a matter of vital importance, not only to him, but to the community that requires his services. We often hear of a railroad which goes to work to build up a traffic. It does this by furnishing a service out of all proportion to the absolute requirements of the community to which it looks. A railroad is run into an uninhabited prairie; it puts sixty trains a day through the sparsely settled suburbs of a city, but eventually it reaps its reward from apparently exorbitant rates for its long-delayed traffic. It is something so with the equipment of the good doctor. He must spend the longest period of tutelage, and must undertake the most expensive system and method of education. Four years in the college, two years in the hospital, and an equal period in the service of a master or in travel abroad, gives today only the average equipment. By this long period of preparation and tutelage the time of possible service is shortened, and the possibilities of financial returns diminished. How necessary, therefore, that the fees of the doctor be made proportionately compensatory. It is for the interest of the community that the doctor be paid, well paid, and promptly paid. It is for the interest of the community that he be a man maintaining the highest standard of professional and social life; he must not scrimp for equipment, books, and professional travel; he must not be hampered by conforming to the precedence of his unskilled and untrained predecessors and contemporaries. As the banker, the merchant and the lawyer sets from time to time a different estimate upon his services, so may

the doctor estimate the honorarium which he believes himself entitled to receive.

This proposition might be illustrated by the difference in method of the doctor of today and of our immediate predecessors; by the examining room of the doctor of today and our immediate predecessors. I remember the method of old Doctor Whitney in my boyhood days. I had scarlet fever, and stayed at his house for several weeks in my convalescence. He felt his patient's pulse, looked at the tongue and eye, rubbed his hand over his clothes covering the affected part, and pulled out his saddle bags and emptied white, yellow, green or black powders upon a row of little papers spread out before him. He was brief, silent, mysterious, insinuating and expeditious. He lived in one of the best houses in the village, and was a sturdy, healthy, cleanly and inscrutable man. His patients loved him, feared him, and paid him. They waited on his front porch until he took them into his narrow, aromatic and cheerless office.

The doctor of today is a simple, straightforward and considerate man. He has extensive, commodious, and thoroughly equipped examining and treatment rooms. His own experience is so limited in his own mind, that he has a growing and extensive library and the files of current medical literature. To these he goes in the midst, perhaps, of a clinical examination. When the patient complains of a discomfort or ill, he makes it the basis of a series of hypotheses, the refutation or confirmation of which requires a careful examination of practically every organ and function of the body. In this examination he must call to his aid the chemical laboratory, the microscope, and the methods of bacteriology and physiological chemistry. A satisfactory examination requires the assistance of one or two helpers, a dozen instruments, and several hours of time. Suppose the patient has a colic and a persistent abdominal soreness, with indigestion, the examination which is necessary may consume two or three days. The possibilities of the case are many and serious, and the examination will include the demonstration of the health of the nose and all its sinuses, the middle ear and its connections, the tonsils and the alveoli, the heart and lungs, and practically every secreting organ in the abdomen. For the examination of the ear and the frontal and nasal sinuses a complicated and expensive apparatus is necessary, with electrical illumination. For the examination of the tonsil and the gums simple instruments and bacteriologic cultures are frequently required. For the examination of the stomach a special apparatus, the stomach tube, and simple or complicated physical and chemical equipment is necessary. For the examination of the urine and blood the equipment may be either simple when there are few evidences of disease, or expensive and complicated when the differentiation between closely related pathologic conditions is necessary. The immediate physical examination of the patient requires large experience, extensive reading, and the absolute relinquishment of the patient to the needs of the examination. The doctor's inspection and palpation must be untrammelled by the patient's clothes or false modesty. The result of these examinations is sometimes positive and sometimes indecisive. It may require weeks and months, or the examination of the patient at a more favorable period in the course of the disease, in order to make the theory of its origin irrefutable. The treatment of the disease after an absolute diagnosis has been made is generally simple, straight-forward and effective. In the example proposed the physician may have discovered its origin in lead poisoning, and the source of the lead in the beer vat, the coffee pot, or the cosmetics on the patient's face. He may have discovered an ulcer of the stomach, and its origin in the diet and habits of the patient. He may have demonstrated the source of the disease in a gall-stone or in a deformed appendix, and then but one remedy can be suggested, and that is the surgical removal of the offending element. He may have found a calculus in a kidney or ureter, or an abscess in one of the calices or in the pelvis of the kidney. He may, God save the mark, have demonstrated the presence of a carcinoma in the pylorus. In any case, whatever the good doctor has done he

has done simply, openly and by a method which may be repeated ad infinitum.

The country is full of unhappy people who are suffering from a failure of some good doctor to make an exclusive and irrefutable diagnosis. Is it a wonder that they seek the consolations of quackery and the delusions of Christian Science or the distractions of a bone-breaking osteopathy or fanticies Dowieism? These unhappy sufferers are willing to pay a dollar a bottle for highly lauded cure-alls, or ten cents a dose for pain-relieving placebos. They will consult the physician for miles about who has the most crowded consulting room, forgetful of the fact that the more certain and prompt the cure, the fewer the waiting patients. They seek cheap doctors, who charge fifty cents or a dollar for a consultation, and give a modicum of time and intelligence dear at half the price. At these free-lunch counters of scientific lore the patient frequently tastes the hardtack and herring which arouses a demand for a professional meal. The unfortunate patient is the victim of his own parsimony. The cheap doctor discovers the possibilities of a graft; the patient is hurried to a consultant; the consultant's fees are extravagantly large; he operates upon his entangled victim, and by the fee-splitting process the cheap doctor gets a shark-like taste of blood.

From this time on the fifty cent or dollar doctor goes on a still hunt for five hundred dollar operations and an equally still hunt for consultants who are willing to pay an increasing per centage as commission or assistant's fees. Through the pressure of the public for cheap consultations and cheap visits the cheap doctor abandons the ethical standards which have prevailed in medicine since the time it emerged as a social unit and placed itself in the lead of the three great professions, and drops to the ethics of the merchant, the real estate agent and the lightning-rod man. He is as far from the ethics of the medical profession as the private fire department, which magnifies its services by encouraging conflagrations in barns, outhouses and deserted buildings in order to cultivate business and secure per centages on the number of fires and the amount of hosepipes strung on the ground, is from the properly sustained department.

The methods of these medical tradesmen is like those of the heathen Chinese, except that too often their tricks are not vain. The wily trickster entangles his patient with soft words and fulsome laudation of his proposed consultant. He magnifies his intimacy, his influence and his pull with the great doctor: he will get a consultation or an operation at a great reduction, but it must be managed carefully; the patient must be very discreet and leave all the management of the financial affairs in his hands. When he goes to the proposed consultant he tells a very different story. The patient is very poor, he has taken care of the unfortunate family without compensation for months and years; he now sees an opportunity of getting a little money for this serious and dangerous operation. Of course it's a matter of little account to the consultant; can he not make a very moderate fee? Fifty or a hundred dollars? He will gladly collect it and attend to the after treatment. The bargain is struck; the patient is operated; he pays the five hundred dollars, and the consultant and operator receive the hundred. In order to impress the patient with the power and possibilities of the local doctor at court, the consultant is asked kindly to receipt for $500.00. If he fails to see the hook, and is anxious to please, he sometimes does this. Great doctors are such poor business men.

But why spread out such nauseating viands for dessert? Because the ethics of society are money mad. Because there is no success except economic success. Because the basis of society today is the dollar, and for the dollar we sell our goods, and our gods.

Some say that the commission business in medicine has come to stay; that the real estate man gives commissions; the banker gives commissions; the lawyer gives commissions, and why shouldn't the doctor get commissions. The same wiseacres say that quackery has come to stay, and so it has. Quackery is the mushroom that grows from the decaying roots of the great oak of honorable medicine. They spring up here and

there in a night and reach maturity and decay before the noon of the first day. And so it is with the medical tradesman who would exploit his patients and degrade his profession. They will soon be on to him. It will be only a day before sharp old deacon Jones will discover that of the thousand dollars he paid for the gastroenterostomy on his poor dying wife, seven hundred and fifty dollars went into the local bank and eventually paid for a piece of his neighbor's farm to add to the medical tradesman's ranch.

When he hears that his cousin's wife's sister is about to be taken for a somewhat similar purpose to St. Caroline's hospital, he will hitch up and drive over and put his cousin's wife's sister's husband next. Nothing is so disastrous to the legitimate occupation, effort, attitude and position of the doctor; nothing is so fascinating to the onlooking community, to the envious contemporary, to the admiring relatives, as the economically and rapidly successful results of the irresponsible fee-splitter. But rest assured, my friends and colleagues, these methods cannot stand the light of day. Society has not forgotten the ancient ethics and ideals of our profession so far as to allow the friendly, confidential and trusted family doctor to drop into the philosophy and conduct of the huckster, who cries his pitiable wares in the professional market place. Rest assured these things will come to the light of day, and the exploited and deluded people will turn from the cheap, business-like, medical tradesmen as they have turned before from many a fascinating quackery or a medical delusion, and when they turn it will be with nemesis-like justice that they turn to rend them.

CARDIAC AND RENAL ASPECTS OF PNEUMONIA.*

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Upon the heart and kidneys may be said to depend the welfare of the pneumonia invalid. A very large proportion of the danger with which this most acute and virulent of the infections is fraught lies in the mechanical burden which the heart must carry, and the chemical residuum from which the kidneys must rid the system. In other acute infectious toxemias, the role of the kidneys as emunctories may be said to overshadow in importance the part played by the heart in combating the disease and carrying the patient through to convalescence. In pneumonia, on the contrary, owing to special conditions, we find circulatory considerations taking precedence of all others in determining the outcome. "Patients who die of pneumonia are killed by cardiac insufficiency," says von Jürgensen, and the truth of this statement is attested by the fact that nearly every system of treatment now employed has substantially the one aim, of maintaining the efficiency of the heart, which, through a brief but stormy period of infection, is taxed to the utmost of its functional capacity.

This being the case, it becomes of the utmost importance to study the circulatory aspects of this disease. At the outset we must be careful to draw a distinct line between symptomatic involvement of the heart and pathologic changes of its tissues occurring as complications. This latter series —endocarditis, pericarditis, etc.—will receive consideration later in the present symposium in the essay on Complications of Pneumonia. Contrary to the usual rule, we find in pneumonia that symptomatic involvment of the heart is of much greater practical importance than the occasional invasion of the cardiac tissues by the infective microorganism, and it is this element of cardiac overstrain to which I invite your attention.

Avoiding needless discursiveness, we may enumerate the salient and important features of acute pneumonia as follows:

1. Pulmonary consolidation with consequent interference with oxygenation and obstruction to the lesser or pulmonic circulation.

2. Pyrexia of a peculiarly fulminant and sustained character, resulting in great de-

*Read at a meeting of the Chicago Medical Society, Dec. 14 1904.

struction of tissue albumin (catabolism), loss of body weight, and physical prostration.

3. Toxemia. Improvement in technique has resulted in demonstrating the pneumococcus in the blood and tissues in so large a proportion of cases as to render it probable that a blood invasion exists in every instance, the lung changes being but one manifestation of a general pneumococcus infection. This pneumococcemia results in the formation and introduction into the nutritional fluids of the body of large quantities of toxin. That the toxemia so induced is one of the most virulent may be inferred from the severity of the systematic reaction, and the high fatality of the disease. It is to the operation of one or more of the foregoing factors that the cardiac asthenia of pneumonia must be attributed.

Cardiac collapse rarely, if ever, occurs during the first, second or third days of primary acute pneumonia. Wunderlich has distinguished two forms of circulatory failure in pneumonia, i. e., collapse with a high temperature, and collapse of the crisis. In the first form the body temperature is high, although the face and hands may be cold; the pulse is small and rapid, and the skin dry. It may occur gradually, and last several hours, or may come on suddenly and pass off quickly, this being the less severe form. It is a grave development and occurs according to Aufrecht in about 0.5 per cent of cases. The second type of cardiac collapse occurs during the definite defervescence (crisis) in two ways, either at the onset of defervescence or more frequently after defervescence has begun. These forms are characterized by cold moist surface, normal or subnormal temperature, sunken face, and marked distress. In young asthenic subjects this collapse frequently passes off under stimulation; in alcoholic and senile cases it is often fatal. Another form of cardiac collapse is the heart failure that follows sudden exertion, such as the assumption of the upright position during convalescence.

Various explanations have been advanced to account for the cardiac collapse of pneumonia. Concordance of opinion cannot yet be said to exist regarding this point. According to von Jürgensen, in a part of the cases the high temperature which occurs from the start in connection with increased resistance in the circulation—at the periphery during the chill, in the lungs during the inflammatory engorgement—causes the weakness of the heart. In other cases of collapse occurring in connection with the crisis, pyrexial causes will not suffice for an explanation. These cases he explains by the hypothesis that the rapid lowering of the body temperature during critical defervescence suddenly withdraws an irritant to which the heart has become accustomed, and with which it cannot suddenly dispense, the result being lessened cardiac activity manifested as collapse. According to this authority, there is the apparent paradox of at one time an increase of, at another a decrease of, temperature producing analogous results. In contravention of the idea that temperature conditions are potent in the production of cardiac collapse may be advanced the clinical fact that the frequency of the phenomenon does not bear any direct relation to the height of the fever. Indeed, quite the opposite seems to be the case, it being a fact that sthenic patients who run a high temperature from the start are more apt to recover without circulatory disturbance than are those cases with less elevation of temperature, or with great irregularity of curve.

Since the concept of infective toxemia has become firmly established, it has supplanted all other ideas as an explanation of the cardiac asthenia of pneumonia. The uniformly injurious influence on the heart of the various acute infections forces the conclusion that this effect is produced by the action of bacterial toxins which reach the heart through the blood stream.

That some important factor in addition to the toxemia enters into the production of the circulatory anomalies of pneumonia seems certain. Were it otherwise, we would expect to have cardiac collapse with the same or greater frequency in other equally profound and more prolonged toxemias, such as typhoid, diphtheria, etc. The statement has received currency that the pneumococcus toxin exerts a direct paralyzing effect on the heart muscle. So far as I am aware, no proof

of this claim exists. Quite to the contrary, the interesting investigation of Pässler and Rolly (Deutsche Archiv f. Klin. Med., Berlin, LXXVI, No. 6) seem to show that the pneumococcus toxin is not a direct heart poison, as is diphtheria toxin, and is incapable of inducing cardiac collapse without the cooperation of vaso-motor paresis. That the toxemia of the disease exerts a most deleterious effect on the myocardium by corrupting its nutritive pabulum cannot be gainsaid; still this is not the only, nor perhaps the most, important effect of the circulating toxins. For the other influences which undoubtedly contribute to the production of cardiac crisis in this disease, we must turn to the circulatory field, and here we find both in the systematic and pulmonary circuits conditions which try the dynamic power of the heart to the utmost.

Vigorous claims have been made that heart failure in acute infectious diseases is brought about by vaso-motor causes, and is not due to inherent cardiac weakness, as was supposed. These claims are founded on the researches of Reige 1, Rosenbach, Bouchard, Romberg, Fraenkel, Pässler and Rolly. It is doubtful however whether the events of an artificially induced pneumococcus septicemia should be taken as a fair duplicate of the clinical course of pneumonia. The most recent authoritative results along this line of research are those of Pässler and Rolly (already referred to). According to the conclusions of these authorities one of the earliest and most persistent symptoms common to all the acute infections is capillary paresis, produced by the action of infective toxins on the vaso-motor centers in the cord. This results in underfilling of the arteries and engorgement of the venous system. This is compensated for a time by extra work on the part of the heart, but the organ soon suffers through lack of its normal blood supply, coronary blood pressure being low. If it is possible to restore the blood supply to the heart approximately to normal, then it resumes its work and collapse is averted. Simple and logical as this explanation seems, it is not yet entirely susceptible of clinical proof. If vaso-motor paresis with hypotension is a common condition in pneumonia, the blood pressure charts of that disease should show it. Very discordant results have, however, resulted from blood pressure observations in pneumonia. The arterial pressure is found to be as variable as many of the other clinical manifestations. Up to the present, observations in this direction have not been numerous or painstaking enough to prove conclusive. Such as are at hand, however, fail to show the uniformly low blood pressure necessary to prove the vaso-motor contention of Pässler and Romberg and Rolly. The general direction of the pressure curve is downward as the disease progresses, but not to the same extent as is noted in typhoid fever and sepsis. In very unfavorable and fatal cases a rapid fall to 80 or 90 m.m. was noted. We cannot, however, regard pneumonia as being a hypotensive disease, as is typhoid fever, and while admitting that vaso-motor paresis may in certain hypertoxic cases play a leading role in inducing cardiac collapse, further proof is necessary before we can accept in full the vascular theory.

There still remains to consider the effect upon the heart of the mechanical obstruction in the pulmonary circulation. This has always been recognized as an important factor in bringing about heart failure in pneumonia. In a considerable proportion of cases as the lesions progress, especially if large areas are involved, there sooner or later arises what may become a very serious mechanical difficulty—the overfilling of the right heart and venous system. Weakened by the action of the circulating toxins, the heart is unable to respond to the extra demands made upon it, a paralyzing over-distention of the right heart resulting.

Heart failure in pneumonia is probably very seldom produced by any one single factor, but its causation is complex. The three principal causes are those which are here reviewed, i. e., the direct action of toxins on the heart, vaso-motor paresis, and over-distention of the right heart. In addition to thes primary causes, there are numerous subsidiary ones, among which may be mentioned the high pyrexia and the chemical and physical changes in the blood, produced by the pneumotoxin. To these latter, acting in

conjunction with delayed circulation through the heart, may perhaps be attributed the formation of heart clot and thrombi, which underlie certain cases of sudden death in pneumonia.

The pulse in pneumonia may show wide variations. During the initial chill it is small and frequent, later becoming full and bounding—such a pulse as was formerly believed to demand blood-letting. As consolidation progresses and the action of the right heart becomes labored, the pulse is apt to be small and rapid. A pulse rate of over 120 in adults or over 140 in children is to be regarded as of grave significance, according to Quain. Greisinger gives a mortality of over one-third in patients who showed a pulse rate of over 120. The table given by Sears and Larrabee seems to illustrate the law that the mortality of pneumonia is in direct ratio to the frequency of the pulse. The line of average mortality seems to be drawn at a pulse rate of 130, below that the fatality is less than the average of 35.9, above it it is higher than the average. Opposed to any arbitrary interpretation of a high pulse rate, it may be emphasized that pulse frequency *per se* does not admit of any definite prognostic estimation. In the absence of delirium or coma, and if there is not too great an increase in respiratory rate, a frequent pulse is not necessarily an unfavorable sign. In the aged and feeble a weak frequent pulse is the rule. A steadily rising pulse rate after the fifth day indicates danger, since it points indisputably to cardiac inadequacy. It is especially ominous if associated with dicrotism and lowered blood pressure. It is here that the sphygmomanometer may render us valuable assistance in prognosis and treatment. Irregularity of the pulse may also occur both in a heart previously sound and especially when there has been a preexisting myocarditis. Should this occur at the height of the disease, the outlook is grave. More frequently it occurs after the crisis, and is of less note.

A sign of great importance is the pulse-respiration ratio. In croupous pneumonia there is always such a shifting that the respirations are relatively more frequent than the pulse. In severe cases they may even become actually more frequent than the pulse. If there is a high degree of atheroma, this may be the case (von Jürgensen). A grave disturbance of the pulse respiration ratio may be regarded as a sign of bad import.

The heart sounds are usually clear, and owing to increased tension in the pulmonary vessels the pulmonic second sound is sharply accentuated. A soft systolic murmur may be heard over the heart, as in weakness of the heart from other causes. Special or dangerous symptoms are not necessarily combined with it. With failure of the right heart there arise signs of dilatation of the right ventricle. This grave development is heralded by progressive diminution in intensity of the pulmonic second sound. The most valuable index of cardiac integrity and the one to be emphasized above all others is the pulmonic second sound. As a rule, cases which display a highpitched valvular second sound in the pulmonic area through to convalescence escape important cardiac disturbance. A progressive diminution in intensity of this sound is a sign of right heart failure, and should be a signal for the employment of supporting measures. The indications derived from careful repeated auscultation of this sound serve as a more reliable guide to cardiac therapy in pneumonia than the state of the radial pulse, which depends on the condition of the left ventricle and vaso-motor tone both of which are influenced in their character by the functional integrity of the right heart. Other signs of right heart failure are increasing dyspnoea, cyanosis, portal congestion with disturbances of digestion, extension of cardiac dullness to the right, tricuspid murmur, gallop rhythm and prune juice expectoration.

Turning now to the renal aspects of pneumonia, we find that comparatively little information is current regarding special lesions of the kidneys in this disease. Notwithstanding the fact that these organs serve as the channel of exit from the body of immense quantities of circulating toxins, the kidneys do not suffer in consequence to nearly the same extent as in some of the other acute infections, notably the streptococcus toxemias.

We may infer from this that the pneumococcus toxin does not exert a specially necrotic effect upon the renal gland structure, for acute infectious nephritis is not a frequent complication of pneumonia. Pneumonia complicating Bright's disease is familiar as one of the most frequent forms of secondary pneumonia, and it is unnecessary to state that under the irritation of the acute disease the Bright's disease becomes *pro tem* converted into an acute process. This is not a pneumonic nephritis, however. We are not warranted by clinical experience in ascribing to the pneumococcus any more important influence in the production of nephritis than is possessed by other infective organisms. In common with other acute infectious processes accompanied by high fever toxemia and grave disturbances of nutrition, pneumonia produces a severe degree of renal irritation, which may at any time pass the boundary line separating irritation and inflammation, and give rise to a typical acute glomerulo-nephritis. Such a process will possess no peculiar distinguishing features, and if the case does not end fatally the nephritis will subside without perpetuation as a chronic lesion. Anatomical changes of slight degree are present in the kidneys in most, if not all, cases of pneumonia, and are no more than result from severe irritation of these organs by other bacterial toxins. Fraenkel found cloudy swelling in every case of a series of 46 observed—the extent and degree varying in different cases, depending apparently upon the amount of lung involvement, and hence the amount of toxins generated. The histological changes are in mild degree those of a glomerulo-nephritis, i. e., congestion, swelling of the Malpighian tufts, granular degeneration of the epithelium of the convoluted tubes. The changes noted are undoubtedly produced by toxins during the process of elimination. Certain observers—Abramoff, Kleinmann—having isolated the pneumococcus from the urine in cases displaying albuminuria, erroneously ascribed the nephritis to the germ rather than to its toxin. Except in those rare cases in which the renal structure is the seat of a local pneumococcus infection, the urine does not contain the germ until the renal filter is rendered pervious by necrotic changes induced by severe toxic irritation.

Sears and Larrabee (Med. and Surg. reports of the Boston City Hospital, 12th Series, Dec. 1, 1901), in an elaborate analysis of 949 cases of pneumonia, found albumin in 624 out of 749 cases in which it was tested for. The death rate was found to run parallel with the amount of albumin in the urine. This association of high mortality with albuminuria may be ascribed to intensification of the toxemia, owing to renal inadequacy, produced by the epithelial changes in the kidneys, causing a heaping up of the toxins in the blood. We are warranted, therefore, in regarding the appearance and persistence of albumin in the urine as an ominous development in pneumonia. Should nephritis become established, uremia may be superadded to the infective toxemia already present.

The discovery of albumin, pus, blood and casts in the urine is in favor of mycotic endocarditis, or of a localization of the pneumococcus somewhere in the renal tissues, as occurred in a case recently under the observation of the writer.

Other urinary considerations in pneumonia are of less importance, and do not require discussion before this Society.

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THE ONSET IN PNEUMONIA-TYPICAL AND ATYPICAL.*

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The onset in the typical cases of pneumonia is so characteristic as to need no particular discussion. In few diseases are the symptoms so constant and so marked as in pneumonia. Yet in spite of this fact the atypical cases when they do occur may be so very atypical as to be entirely overlooked. In consequence many a pneumonia is found on the post mortem table where during life it was not even suspected, and this because

*Read at a meeting of the Chicago Medical Society, Dec. 14, 1901.

the onset had not pointed to the lungs in particular and the latter were in consequence not carefully examined. I shall sketch in a few words the typical onset; devoting more attention to the atypical cases.

Highly characteristic of a typical case is the suddenness of the onset. The chill is, as a rule, the first symptom noticed; it is usually violent, often prolonged and followed shortly by great increase in the frequency of respiration, usually above 30, dyspnoea, and then the sharp stitch pain in the side. The pulse respiration ratio is greatly disturbed, the respirations being increased out of all proportion to the pulse. In many cases the temperature has little effect upon the respiration. The headache, backache, slight bronchitis and general muscular pains which are so characteristic of many acute infections, are much less prominent symptoms in pneumonia, occurring perhaps one fourth of the cases. In rare instances a fairly copious haemoptysis may occur at the very beginning. For the first twelve to twenty-four hours there is usually little or no sputum. The sputum then takes on its characteristic thick, tenacious mucous character, adhering to the lips and to the vessel and with the well-known rusty color. When so typical a picture as this occurs, he must indeed, be a careless observer who would fail to examine the lungs at once, where the well-known physical signs make the diagnosis ordinarily a simple matter. Even where the pneumonia is central the symptoms are usually so typical as to admit of a probable diagnosis at once, and within forty-eight hours the physical signs of consolidation are usually obtainable.

ATYPICAL CASES.

Meningeal Onset. In a small number of cases the disease is ushered in with symptoms of meningitis, entirely apart from those cases where meningitis actually exists as a complication. This is an old and comparatively well-known fact, and pneumonia shares this peculiarity with a large number of other infections. Indeed here, as in typhoid, the resemblance to meningitis may for a short time be very striking, but the pulse respiration ratio followed soon by the evidences of consolidation usually leave little room for doubt.

Abdominal Onset. On account of the grave consequences which might follow a mistaken diagnosis these cases deserve some attention. That pneumonia frequently begins with sharp abdominal pains as the most prominent symptom has long been known but little heeded. This fact was first impressed upon me about seven years ago when I saw one of the most distinguished abdominal surgeons in the country operate a woman for supposed salpingitis, the case dying within twelve hours and the autopsy revealing a double croupous pneumonia in full bloom. In this case the pain had been of an excruciating character. The onset was very sudden, with vomiting and tenderness in the right lower abdominal quadrant, where there was also some localized tenderness. This is a fair sample of this group of cases which is still much too seldom recognized. Attempts have been made, particularly by French and Italian authors, to classify the abdominal cases according to the localization of the pain and tenderness. They would especially separate the so-called appendicular form where the pain and tenderness are localized at McBurney's point for the first day or two. There is no doubt as to the striking way in which these cases may simulate appendicitis. Almost every feature may be present—lancinating pain in the right lower abdominal quadrant, tenderness localized at McBurney's point, vomiting, fever, leucocytosis, etc., may all be present. Indeed, apart from the physical examination of the chest, I know of no certain criteria by which the two may be differentiated. Massalongo (Riforma Medica, Dec. 11, 1901), calls particular attention to this in childhood and speaks of five cases operated on under the erroneous diagnosis of appendicitis. That these so-called appendicular cases are the most frequent form of pneumonia with abdominal onset can scarcely be gainsaid, yet for all that I think there is no justification for classifying them as a separate group of cases. The readiness to make the diagnosis of appendicitis in view of its great frequency,

without a careful physical examination of the chest is responsible for most of these errors. It is altogether probable that in most, if not all of these cases, a systematic examination of the chest would disclose the real lesion. The real lesson to be learned from this group of cases is that appendicitis should never be diagnosticated from an examination which limits itself to the abdomen only.

In other cases there may be intense pain, sometimes even of a colicky character, with tenderness just beneath the right costal arch. It is in this group that cholecystitis, biliary and even renal colic may be mimicked for the first twenty-four or thirty hours. That pneumonia is more common on the right side probably accounts for the fact that the abdominal pain is more common on the right side than on the left. It would be going too far I think, to attempt to separate a special appendicular group, a hepatic or renal group in accordance with the location of the pain. What is urgently demanded is not so much the hyper-refinement of classification, but that the physician, and still more the surgeon, should remember the possibility of pneumonia in every case of acute abdominal pain, and more especially take to heart the elder Flint's word of warning that no diagnosis should ever be made where both heart and lungs are not carefully investigated. The explanation of the occurrence of these reflected pains in the abdomen is comparatively simple and has been repeatedly pointed out. The innervation of the abdominal wall is from the six lower intercostal nerves and these in their passage downward give off filaments (Luschka, quoted by Quain) to the diaphragmatic pleura, possibly to a part of the parietal pleura as well. It is plain therefore, that irritation of these parts of the pleura might readily produce a pain which would be referred to the abdominal distribution of these same nerves, and thus mimic disease of the abdominal organs.

Onset in Childhood. Croupous pneumonia while less common in childhood than in adults, is according to all late observers, by no means so rare as is commonly supposed. As a rule the onset is quite typical, a convulsion however, frequently taking the place of the chill. Gillet (Gazette des Hôpitaux) has very recently emphasized the frequent onset of pains in the appendix region in childhood.

Senile Pneumonia. Pneumonia in the aged, on the other hand, the so-called senile pneumonia, presents at times marked variations from the typical onset. Firstly the onset, or indeed the entire course may be completely latent, physical examination alone disclosing the pulmonary lesion. Aufrecht quotes Hourmann and Déchambre as saying, with characteristic French pithiness, "Old women do not even complain of being ill. No one in the ward notes the slightest change in their condition. They get up, make their beds, go around, eat as formerly, then they feel themselves somewhat weak, lie down on the bed and die." For the many cases of pneumonia seen in the asylums and institutions for old people this description is particularly apt. In some cases there is a chill, but the rise of temperature is very slight. A chill occurring in old people with no apparent cause should always be regarded as suspicious of pneuomnia. In what are known as the terminal pneumonias, and by this I do not mean the so-called hypostatic pneumonias, but the genuine croupous pneumonia occurring as a terminal infection, the onset and indeed the entire course, is frequently latent. This is especially true when the pneumonia terminates some other acute infection where apparently the vitality is already too greatly impaired to respond to the new infection with such symptoms as chills, fever, etc. In alcoholics the same statements apply. While in many cases the onset is perfectly typical, in a very considerable proportion the onset is entirely latent, there being neither the initial chill nor expectoration and a comparatively slight dyspnoea. Anyone who has had the opportunity of seeing many cases of violent delirium tremens in hospital practice where the difficulties of physical examination are very great because of the frequent necessity of confining the patients, must have often noted in the cases

which come to autopsy, a frank pneumonia quite unsuspected during life.

Onset in Friedlander Pneumonia. As is well known a certain small proportion of cases of croupous pneumonia are due to the pneumo bacillus of Friedlander. The clinical symptoms do not ordinarily differ from those of cases caused by the pneumococcus. In one important point however these cases frequently differ from the ordinary form, namely in regard to the character of the sputum. As I do not remember to have ever seen attention called to this point I should like to call attention to it here. As already mentioned the sputum in the ordinary form is tinged with blood at the onset, taking on its characteristic rusty color shortly afterwards, and is very tenacious and viscid. In the Friedlander pneumonia the sputum takes on an entirely different character and from it alone a fair presumption of the form of pneumonia can often be made. It is intensely mucoid, ropy and stringy and when a mass of it is lifted up on a knife blade or similar instrument, it can be drawn out in long threads. This is not remarkable when we remember the peculiarities of the Friedlander organism in the culture media. At the risk of digressing for a moment from my topic, let me point out a fact comparatively little known or referred to, and that is that on the post mortem table it is frequently quite possible to pick out a case of Friedlander pneumonia with considerable certainty by observing the chararter of the cut surface. Instead of the comparatively dry surface ordinarily found during the second and third stages, the surface of section is bathed with the same ropy, tenacious, thick, rusty-looking mucus which has really something quite characteristic about it, and once having been seen is easily recognized.

Onset with General Pneumococcus Infection. Very much rarer than any of the above cases, but likewise very much more interesting are the cases where the onset is with a pneumococcus septicaemia. The researches of the last two or three years have shown how frequently pneumococci may be recovered from the blood after the primary lesion in the lung has developed, but it is still not very generally known that there are cases of generalized pneumococcus infection where the lung lesions never develop or if they do, develop subsequent to the general infection of the blood. One such case which I have seen in consultation within the last month illustrates this point so excellently that I cannot refrain from quoting it. The patient, a strong, robust man always well, except for a chronic naso pharyngitis, was suddenly attacked with intense headache localized above the right ear, with however no chill and a rise of temperature to above 103 degrees. Within a few hours the right ear began to discharge a thin, watery, blood-stained, serum. At the same time a precisely similar fluid came from the nose. There was an old perforation of the right ear drum, and it was through this that the otitic discharge occurred. Physical examination was absolutely negative for several days, after which a basal pneumonia developed. During this time the temperature was continuously high. The secretion from the ear showed a nearly pure culture of pneumococci, and a blood culture (8 c.c. of blood) planted in flasks of bouillon gave a pure culture of pneumococci twenty-four hours before the physical signs of consolidation in the lungs were definitely present. The sequence of events in this case may, I think, be followed with considerable certainty. The seat of infection was in the nasal pharynx, possibly in the middle ear as well, and not improbably associated with the chronic naso pharyngitis. From one or both of these sources pneumococci were absorbed into the circulation, producing intense headache and high fever, but no chill. This is proven by the finding of pneumococci in the blood at this time, following which the physical signs of a basal pneumonia developed. We must therefore recognize cases of pneumonia in which the onset is with a pneumococcus septicaemia. It would lead us entirely too far to enter upon a discussion of the exceedingly important bearing which a case of this kind has upon the question of the avenue of infection in pneumonia. For this particular case I con-

sider the haematogenous origin of the lung lesion as definitely proven. Without wishing to generalize from a single case, however clear that case may be, it may be noted that this lends additional color to the opinion which is steadily gaining ground in the last few years that pneumonia is primarily a general infection, with local manifestations in the lungs. With the increasing frequency and improved technique of blood cultures, cases of this kind will probably be more frequently found.

THE PHYSICAL BASIS FOR DIAGNOSIS IN PNEUMONIA.*

BY ROBERT H. BABCOCK, M. D., CHICAGO.

The pulmonary findings on which the diagnosis of acute croupous pneumonia may be based are determined by the pathological condition within the lung, and as this latter varies so much in extent and in character during the different stages of the process, the physical signs display corresponding differences in definiteness and character. There are three propositions, therefore, which I regard as fundamental to a correct understanding of the data furnished by examination of the chest in this affection. 1. The exudate is not necessarily lobar in extent, but may be lobular or patchy, and hence the objection to the term lobar pneumonia. This is especially true of this disease in children and old or debilitated subjects. It is ignorance of this fact that is responsible for the failure on the part of some practitioners to always recognize the disease in the class of cases referred to.

(2) The inflammatory exudate does not always form rapidly and uniformly throughout the affected lobe, and hence three or four days may elapse before the exudate beginning deeply spreads to the surface, so as to become clearly recognizable at the bedside. This fact accounts, I think, for many a disastrous delay in diagnosis, and hence has an important bearing on treatment.

(3) There may sometimes be a striking contrast between the severity of constitutional symptoms and the results of physical examination of the lungs. For this reason a practitioner should make repeated examinations of the chest early in the course of the affection. Later on frequent and careful examinations are also necessary, because of the liability to extensions and the importance of their recognition. In fact, I believe the state of the lungs should be ascertained at each professional visit, since only by so doing can the physician have an accurate knowledge of what is going on.

From the standpoint of diagnosis by physical signs, therefore, I think cases of pneumonia may be divided into four classes. One, those in which the diagnosis may be made almost at a glance, or at all events from the history and symptoms without examination of the lungs, yet which when made discloses characteristic and positive findings (typical pneumonia.) Second, those in which the constitutional disturbance is grave but often misleading and yet physical signs may be distinct and typical (asthenic pneumonia.) Third, those in which with grave and highly suggestive constitutional symptoms there are yet no reliable physical signs to be discovered by the most painstaking examination of the chest (centric pneumonia.) Fourth, those in which both constitutional symptoms and objective physical findings are not typical (typical pneumonia.)

Having now stated these postulates, which should be kept in mind if one is to understand the variations and difficulties sometimes encountered in the diagnosis of this malady, I will proceed to a description of the physical signs as presented in an ordinary case of acute primary fibrinous pneumonia.

Only yesterday I was asked to see in consultation a man of sixty, who was suffering from cardiac insufficiency. He had been having a cough of chronic bronchitis and two weeks ago was edematous. Treatment had improved his condition, but for the last three days he had been slightly delirious. I found a heart lesion, to be sure, but the pulse was only 96, and signs of stasis were not present.

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The thing that struck me at once was the character of the respirations, which were shallow and 40 to the minute. Mouth temperature was normal, but in the rectum the thermometer registered 102° F. The lungs were then carefully examined, with the result that on the left posterior axillary line, not far from the scapula, was discovered a small patch of dullness with increased resistance, slightly exaggerated tactile fremitus, and bronchial breathing. On these findings a diagnosis of pneumonia was made. Without the loss of normal pulse respiration ratio, I should not have suspected acute pneumonia, but with this and the rectal temperature I was led to go over the lungs with more than ordinary care and with the result just stated.

State of Engorgement. In this stage it is often only possible to make an inferential diagnosis, and this must be based on the history and symptoms rather than physical findings. The breathing may be accelerated, and the expansion of the affected lung may be restricted. The loss of normal pulse respiration ratio so valuable for diagnostic purposes at a later stage is, however, not likely to be apparent. There may be slight deviation from normal findings, as stated later on, but on the whole examination may be said to afford rather negative information in this initial stage.

Stage of Hepatization. Inspection is now of value by noting the bright eye, flushed cheek, perspiring skin and hurried, labored breathing. This last should be especially noted, since in typical cases it is accelerated out of all proportion to the pulse. Indeed, this loss of normal pulse respiration ratio is of immense significance, and should be carefully sought for, especially in children, and in old or debilitated subjects, in whom lung findings are so often indefinite. Inspection of the thorax may be of material aid, particularly in the young, in whom, if a lower lobe is involved, there may be an apparent enlargement of the side. Writers in the early part of the last century differed much in their estimate of this sign. Thus Laennec, Andral and Woillez denied such increase, while Broussais and Wintrich maintained that the affected half of the chest is enlarged from 0.5 to 2.5 cm. We know that the volume of the hepatized lobe is somewhat increased, as shown post-mortem by indentations in its surface corresponding to the ribs, but, as pointed out by Aufrecht, the lobe is only in the state of forced inspiration and not actually increased over its normal dimensions. This expansion, together with restriction of its expiratory movements, gives to the side the appearance of being enlarged over its fellow. This appearance is, however, not so pronounced as in pleurisy with effusion, and the apex beat of the heart is not usually displaced to any appreciable extent toward the opposite side, a valuable point in differential diagnosis.

The detection of herpes, is of a certain degree of diagnostic value, but its absence possesses no importance since, according to Juergensen, it is present in only from 13 per cent. to forty-three per cent. This eruption is generally seen about the lips, but may appear on other parts, and generally makes its appearance on or about the third day. Dilation of the pupil on the side corresponding to the pneumonia has been observed, but is by no means a constant nor in my experience frequent feature.

Mensuration is of so little value that any information it may furnish is more than offset by the difficulties attending its use. I know of no one who now employs it for diagnostic purposes.

Palpation may be very useful in some instances, but cannot be said to yield uniformly positive results. Theoretically, pectoral fremitus may be said to be diminished over the inflamed lobe in the stage of engorgement and increased in that of hepatization. As a matter of experience, however, palpation is of small aid in the beginning of the process, while during consolidation tactile fremitus may be decreased in consequence of blocking of the bronchioles, alveolar passages and infundibula by an abundant exudate (massive pneumonia), or on account of the interposition of pleuritic exudate between the lung and chest wall. For these very reasons,

however, palpation ought to be practiced, since it is likely to yield valuable information on other points than that of mere hepatization.

The detection of increased vocal fremitus over a circumscribed area is of great importance in cases of patchy pneumonia, and often helps materially in the differentiation of such a patch of dullness with indefinite auscultatory findings from one due to pleuritic exudate. In young children in whom percussion is often difficult and unsatisfactory, I have often derived most valuable information from palpation. The child's chest is an admirable conductor of vibration, and although a baby's lungs may transmit a cry or expiratory moan in all directions, still over a small patch of lobular consolidation the fremitus thus produced is usually perceived by the hand with greater distinctness than elsewhere. As pointed out by me in my discussion of Dr. Northrop's recent address in this hall, this means of investigation has more than once enabled me to locate a pneumonic patch of the exact location of which I was otherwise uncertain.

Percussion. By palpation also we are enabled to detect enlargement of the spleen, a feature common in pneumonia in children, and often present in adults. Next to auscultation this may be said to yield the most valuable results. It is based on the well known principle that in proportion to the displacement of residual air by the inflammatory exudate, the ordinary pulmonary resonance becomes replaced by dullness. In the same way in engorgement, when the alveolar lumen is encroached upon by the distended capillaries, the percussion note over this region is apt to be more or less impaired. At the same time it takes on a slightly tympanitic quality, which by most writers is attributable to lessened elasticity and tension on the part of the engorged parenchyma. By Gerhardt it is ascribed to admixture of air and moisture within the affected area, and hence is apt to be most marked as well as transient during the transitional period, when engorgement is passing into hepatization. In this stage of passing engorgement, however, the portion of lung bordering the pneumonic zone lacks its normal tension, and may yield a note so full and tympanitic as to obscure the slight deadening of tone due to the engorgement, and hence the unwary physician may be led into error.

With the oncoming of hepatization, pulmonary resonance becomes correspondingly impaired, until at length with complete consolidation unmistakable dullness is produced. The degree of dullness depends upon the compactness and extent of the exudate. In classical cases one or more lobes are involved throughout, and dullness is pronounced, but in the patchy cases already referred to there may be but a small area of relative dullness which in the old with rigid chest walls may be readily overlooked. In all doubtful cases, therefore, careful comparison should be made with the opposite side and the degree of associated resistance should be carefully noted. Palpation of such a suspicious area should also be made, since any increase of fremitus, however, slight, may corroborate and clinch the conclusion drawn from percussion.

It should also be borne in mind that time is often required for the exudate to reach the periphery, and hence repeated daily percussion of such indefinite areas ought to be made. When unmistakable dullness is present, it is well to remember that it is rarely so intense or absolute as over a pleuritic effusion. Moreover, it does not spread from below upward and the upper line of dullness does not shift with change in the patient's condition, a valuable point in differential diagnosis.

As the stage of red passes into that of grey hepatization, there is a period of time when the previously dull note becomes again slightly tympanitic, due to the admixture of air with the liquifying exudate. As resolution progresses, pulmonary resonance reasserts itself, until in favorable cases it becomes fully restored. This may require only hours or days in some instances, but not infrequently relative dullness may persist for weeks or months, and then points to defective resolution or the presence of pleuritic exudate.

In the correct interpretation of such per-

sistent dullness palpation is of aid, and should be practiced.

Auscultation. The most characteristic phenomenon elicited by physical examination is perceived on auscultation, and is the crepitant rale, but as this is transient in duration other signs must often be relied on. In the stage of engorgement the breath sounds are enfeebled and indeterminate for the same reason that resonance is impaired. As this stage merges into hepatization, they assume a bronchial or semi-bronchial character, and the crepitant rale is heard.

By some Leming's view is held that this rale is a pleuritic exudation rale, while most others hold to its intra-alveolar origin, but whatever view be correct, this rale in its purity is so peculiar that when once heard it can never again be mistaken. At this time it is purely inspiratory, and so evanescent that it may be present for only a few hours, depending upon the rapidity and completeness with which the exudate forms.

During the height of the consolidation, bronchial breathing is audible, depending in intensity and purity upon the state of the bronchioles, the same as does pectoral fremitus. Such rales as may be heard at this time are either pleuritic, or the fine subcrepitant ones of associated edema and bronchitis, and hence are usually heard about rather than directly over the dull area. The voice at this stage is usually of a pectoriloqous quality. This state of things persists until resolution sets in, when again for a variable length of time crepitant rales are distinguished. This so-called rale-redux differs somewhat, however, from that heard earlier in the disease. The rales still possess the same peculiarly sharp or clicking character, but are generated with both acts of respiration, instead of being limited to the end of inspiration. According to Page, they are somewhat coarser, but in this regard I have never been able to detect any difference. I have often noted, however, that crepitant rales, when present at any stage, frequently have to be sought for with great care, and many times may only be detected after the patient has given a cough. Neither this true crepitant râle, nor any other sign, is essential to the diagnosis of pneumonia. It is the combination of the two or more signs which is significant. Thus in a patchy pneumonia, with slight exaggeration of fremitus and relative dullness limited to a small area, the addition of bronchial breathing over this area and in particular of crepitant râles places the diagnosis beyond doubt.

With progressing resolution the breath sounds grow less and less bronchial, until normal vesicular respiration reappears. Râles, if present, gradually disappear and when resolution is complete the lobe furnishes normal physical findings. Such return may be rapid and complete, but it not infrequently happens that the signs of hepatization persist for many days or even weeks after temperature, respirations and pulse have become normal. This is particularly so in the cachectic and bespeaks imperfect or delayed resolution.

In classical cases of sthenic pneumonia the abrupt onset with rigor in about 54 per cent pain in the side, high fever, cough, rusty and tenacious sputum, flushed face, full bounding pulse, disproportionately hurried breathing, expiratory grunt, dullness, bronchial respiration and perhaps crepitant râle form a symptom complex which renders diagnosis easy and certain. Likewise in the asthenic type of the affection the association of profound prostration, fever, slight cough without expectoration it may be, loss of normal pulse respiration ratio, and often well-marked findings in the lungs places diagnosis beyond doubt.

In centric pneumonia, on the other hand, without definite pulmonary signs and in atypical cases in which constitutional symptoms may be misleading and the lungs display patchy dullness, with indefinite auscultatory findings, the diagnosis may be sometimes impossible without calling to our aid other means of investigation, as microscopic examination of the sputa, estimation of the chlorides, a leucocyte count, and even blood cultures.

Microscopic inspection of properly stained sputum will, when characteristic diplococci

are discovered, prove a valuable aid and may oftentimes substantiate a diagnosis which from examination of the patient alone is uncertain. But in these atypical cases in which the character of the sputa would be of assistance, expectoration may be and often is wanting. Then it is we must resort to still other means. If, on estimation of the chlorides in the urine, these are found decidedly diminished, this fact, taken in connection with even indefinite yet suspicious pulmonary findings, may enable one to arrive at a correct conclusion. On the other hand, the chlorides are not invariably reduced in pneumonia, and Dr. E. F. Wells declares they may even be increased. Moreover, diminution of the chlorides is not confined to this affection, but may be met with in chronic nephritis and some diseases manifesting high fever; so that this means of investigation may, like inspection of the sputum, fail us in the very cases in which we need its aid.

How is it now with the leucocyte count? As a rule, the white cells are increased, often enormously so, and when hyperleucocytosis is present, it furnishes strong corroborative evidence in doubtful cases. But as is well-known, unfortunately the white cells may not be increased or even may be actually diminished, and I have known this to be the case in atypical pneumonia, as witness an instance recently seen in Cook County Hospital; consequently, reliance cannot always be placed on this means of investigation.

This brings us, then, to what may be considered the last court of appeal, namely, blood cultures. The elaborate investigations of Rosenow have shown that if a sufficiently large quantity of blood be taken under proper precautions, at least ten c.c., about 95 per cent of all pneumonias will display pneumococci in the blood. When such is the case, then the diagnosis is definitely settled. But what with the remaining five per cent which fail to show the germ?

All that can be said is, diagnosis is either impossible or must be considered inferential. In such instances I can only recommend that repeated painstaking examinations of the lungs be made at each visit in the hope of at least detecting some minute patch where resonance is impaired, and bronchial breath sounds are audible. At the same time, make a careful count of the pulse and respirations, since if there be even a slight loss of normal pulse respiration ratio, it will, in my opinion, suffice in connection with vague lung findings to establish the diagnosis. This loss of normal ratio may be so slight as 28 to 96, as in a recent instance. Yet since the relation should be 28 to 112, even so inconsiderable a perversion is often of immense significance. On the whole, I think it is not too much to say that if all these various means of physical exploration be made, the number of cases of pneumonia that escape recognition will sink to an insignificantly small number.

"Jove from his urns dispensing good and ill,
Gives ill unmixed to some, and good and ill
Mingled to many, good unmixed to none."
Homer.

THE DIAGNOSIS AND METHODS OF TREATMENT IN CHRONIC PROSTATITIS.*

BY F. A. LEUSMAN, M. D., CHICAGO.

The prostate consists of from thirty to fifty branched tubular glands, converging toward the base of the colliculus seminalis. Many ducts join with one another and open into the urethra in the region of the caput by from fifteen to thirty orifices. The epithelium lining the tubules is cubical. The prostatic urethra is made up like all parts which conduct urine of the following layers: (1) Mucosa; (2) submucosa; (3) muscularis; (4) fibrosa. The mucosa consists of an epithelium and a tunica propria. The former is the so-called transitional epithelium composed of three or more layers. While these cells differ in the various layers, they are quite similar in all parts of the canal, so that in pathological conditions of the tract, where the cells appear in the urine, it is difficult to say from what part these cells are derived. The muscularis in the prosta-

*Read at the Dec. meeting of Chicago Medical Society.

tic and membranous urethra shows two layers of smooth muscle fibres, an inner longitudinal and an outer circular coat. The circular coat is wanting in the pars cavernosa, and the longitudinal layer becomes very thin. In old individuals the gland tubules form so-called prostatic stones, about one millimeter in diameter, very hard and often calcified. A considerable part of the prostate is formed by the interstitial tissue between the glands. This is made up of a firm connective tissue containing many bundles of smooth muscle cells. It forms at the outer surface of the organ a well developed capsule, and on the inner surface next the urethra it is collected into a thick layer, from which there proceed in the region of the veru montanum strands of connective tissue running radially towards the capsule. At about the middle of the prostatic urethra, on its floor, is the colliculus seminalis (caput gallinaginis, veru montanum), an eminence at its highest point of about 3 m.m.; in its descent as mucous folds gradually it loses itself towards the trigonum and membranous urethra. On the anterior decline of this hill between the mouths of the two ejaculatory ducts is the opening of the sinus pocularis, or so-called utriculus prostaticus, about 10 m.m. in depth; it represents the remains of the caudal end of the fused ducts of Mueller, and is lined with a double row of ciliated epithelium containing small tubular glands. The ducts of exit, about 1 c.m. in length, have been called parietal glands in contradistinction to their ramifications, the terminal glands; both sets freely anastomose. Eberth distinguishes: (1) The parenchyma; (2) the framework of scaffolding; (3) the muscles. The glands are the parenchyma, opening at the caput, and make up in the adult about ¾, ½ to ⅚ of the organ. The glandular development, however, is subject to many variations, so that we encounter soft prostates, rich in glands, and hard prostates, poor in glands, and rich in muscles.

The first anlage of the prostatic ducts appears during the third fetal month, in the form of solid epithelial buds of the urethral epithelium, that grow from the prostatic floor, throwing out branches laterally. By progressive longitudinal growth they perforate the mucosa and also the next layer, composed of nonstriated urethral muscles. Eberth refers to rare cases where the glandular masses have all been placed anterior to the urethra.

The scaffold contains, besides blood vessels and nerves, elastic and numerous nonstriated muscular fibers. On the surface this framework becomes condensed into a layer about 1 m.m. in thickness, rich in non-striated muscles, and fibrous connective tissue, the capsule of the prostate. The non-striated muscles are a continuation of the musculature of the ureter and the trigonum vesicae, the striated part of the perineal muscles.

An additional close relationship between prostate, bladder and rectum is maintained through the arterial supply derived from branches of the inferior vesical and the middle hemorrhoidal arteries. They enter the gland conjointly with the ejaculatory ducts, to form capillary plexuses around the walls of the ducts. The veins empty into the vesico-prostatic plexus, an aggregation of veins that fills out the bilateral sluous between bladder and prostate. The plexus vesicoprostaticus receives the veins derived from the bladder, prostate, seminal vesicles and vas deferens. *It is connected by large branches perforating the prostate with the submucous venous system of the urethra and the bladder.* The lymphatics, with which the prostate is richly supplied, take origin around the glandular walls, ramify with the venous plexus, and finally end in the internal iliac nodes. The prostate has a rich nerve supply derived from the hypogastric plexus. It contains end bulbs. A ganglion containing twenty cells has been described by Reichert.

The prostate, situated close behind the symphysis pubis and resting on the deep perineal fascia, enjoys a limited range of movability in the normal state. It is from apex to base 1¼ inches long, 1½ inches wide at the base, and less than one inch in thickness.

The prostate gland is a sexual organ and only accidentally a urinary one, whose func-

tion is to provide an abundant secretion in which the spermatozoa can live. Comparative anatomy shows that testes exist in all animals; the seminal vesicles, however, the prostate and Cowper's glands are not always present in the lower animals, sometimes one and sometimes another being absent, diminutive, or perhaps greatly enlarged. The testes are the essential male organs of generation. The accessory sexual glands furnish a medium for the spermatozoa to live in. If any of them are absent, the balance grows larger and perform their function. The complete separation of the seminal vesicles from the vasa deferentia and the consequent absence of any direct communication between the two, as seen in the elephant, swine, ant-eater, beaver and others, seems to controvert the belief that the office of the vesicles is that of a storehouse for the spermatozoa.

Perineal prostatectomy with total removal of the floor of the prostatic urethra, also external stricture operations; Zeissl with his demonstrations that the vesical internal sphincter relaxes through the action of the nervi erigentes; Rehfisch with his stiff catheter experiment introduced close up to but not beyond the internal vesical sphincter, have all shown that we exercise voluntary control over the internal vesical sphincter, even if that muscle is not straited.

Experimental surgery on the human and other closely related mammalia has shown that castration in a less degree, vasectomy, diminish the size of the prostate at the expense of its glandular part. Castration causes a lessening of prostatic volume by abolishing its function. Castration or vasectomy can only then be followed by a reduction in the prostatic volume, if the overgrowth is of a glandular character. Hence we observe a small prostrate always in the eunuchs, individuals who have been deprived of their testicles before they had been given time to develop their prostate glands. Prostatectomy immediately or soon after produces impotence. The normal prostatic secretion is a limpid, milky fluid of alkaline reaction, and free from mucus and rich in albumin, of characteristic odor. The microscope shows it to consist mainly of lecithin, strongly refracting granules (the cause of the milky appearance), a few amyloid bodies, isolated epithelian cells, and perhaps a few leucocytes. These lecithin granules in all probability are the remains of degenerated prostatic glandular epithelium; this degenerated epithelium also forms the basis of the amyloid or straited prostatic concretions.

The addition of a one per cent ammonium phosphate solution demonstrates after one to two hours' time the spermin crystals in the absence of urine. The prostate has nothing to do with voluntary or involuntary control of micturition.

Pathological changes of the prostatic secretion appear to result in impotentia generandi. The secretion is now a thick, yellowish or reddish fluid, containing principally pus cells, and a less number of cubical, epitehlial and red blood cells, and possibly bacteria. The prostatic secretion is subject to many changes. Congenital smallness of the prostate is not rare. Acquired atrophy may be senile, cachectic, functional, inflammatory and traumatic. The hypertrophy is glandular, myomatous or mixed.

Ciechanowsky teaches that the enlargement of glandular hypertrophy is not so much a real increase in glandular structure as a passive dilatation of the achini from an accumulation of physiological or pathological products; hence it is a pseudo-hypertrophy or pseudo-adenoma. Connective tissue proliferation (cicatrices) in the vicinity of the exit ducts appears to be the leading cause. The myomatous hypertrophy might be looked upon as a compensatory process. If the cicatrix formation begins mainly in and near the terminal glands, the same process will lead to atrophy. Needless to say, both processes involve different parts of the gland in a different degree.

Clinical observation leads to the conclusion that gonorrheal and other (metastatic) infections, as during the acute fevers, also accidental instrumental infection, furnish almost always the exciting causes, while masturbation, ungratified sexual desires, sexual

excess, coitus reservatus, alcohol, over-eating, lack of exercise, constipation, severe chilling, act as the predisposing moments. Severer forms of prostatitis are frequently accompanied or followed by cystitis, cystopyelitis and ascending nephritis. The patient refers his complaints to the urinary or sexual function as impotence, or suffers with pains, exhaustion and disabilities generally. Prostatorrhea, constant or more often occurring as micturition and defection prostatorrhea, exercises his mind greatly, since he mistakes the escaping substance for seminal fluid. pollakiuria and terminal painful emptying of the bladder; nocturnal micturition; severe and lasting headaches; dyspeptic pains; sensations of oppression, heat and cold, further add to his discomforts and overtax his forces. He is often seen shaking his penis vigorously and stroking his urethra from the perineum downward, while engaged in the effort to empty his bladder, and bring the dribbling of his urine after micturition to a standstill. This phenomenon is assumed to be due to either a paresis of intermittent spasm of the compressor urethra muscle. This same dribbling occurs in urethral stricture and prostatic hypertrophy, and tuberculous infiltration of the internal vesical sphincter. The bulboud sound and the catheter after voluntary urination serve for differentiation of the former two.

Perhaps not less annoying are disturbances of the sexual function, as absent, evanescent, or persistent erections, ejaculatio praecox, or painful emissions, so that the patient speculates whether the act is more conducive to pain than to pleasure. Finger attributes this pain at the moment of ejaculation to a compression of the opening of the ejaculatory duct or ducts, the result of inflammatory changes. Sexual desire itself in aggravated cases is nearly lost. The possibility of a total loss of sexual desire is more than doubtful When sclerotic changes affect larger sections selves. There may be in addition nocturnal of the ejaculatory ducts, to a degree sufficient to cause them to lose their contractile powers, their lumen will remain patent, occasioning a spermatorrhea of truly prostatic origin, with no disease of the seminal vesicles themselves. There may be in addition nocturnal pollutions in excess, local and general neuroses. The urine is clear or cloudy, but usually we can observe some of those comma-shaped short filaments issuing from the prostatic ducts. The second morning urine will almost always show them. The cloudiness is due to mucus, pus, bacteria, phosphates or urates. The eye distinguishes mucus and pus in excess, or we use Dhome's test by adding a saturated solution of caustic potash and then twirling the tube, when a ropy separation of pus will soon be provoked; in bacteriuria caustic potash will not separate the clear urine.

The centrifuge obtains a microbic sediment after there has been previously added an equal volume of absolute alcohol to the sample. In many, not by any means all, cases, a condition of neurasthenia, melancholia and hypochondriasis is observed, differing in no way from neurasthenia seen in cases without prostatic disease.

The diagnosis comprises a thorough general physical and psychical examination, reviewing all the organs seriatim and inquiring into the antecedents and especially the habits of the patient. Constitutional diseases, like syphilis, diatheses, like gout, tuberculosis, or nervous system disease are searched for. Previous forms of treatment and results are noted. We investigate possible sources of ascending or metastatic infection by looking for evidences of gonorrhea, typhoid, scarlet and other fevers, or the history of the use of surgical instruments, like catheter, sounds, instillators, electrodes, in the hands of an attendant or those of the patient himself. Surgical instruments not free from sepsis or trauma have in the past been favorite methods of conveying infection to the prostate. The diagnosis further concerns itself with other predisposing, coexisting or contributing factors, as phimosis, anterior urethritis, urethral stricture, epididymitis, varicocele, prostatic hypertrophy, contracture of the vesical neck, cystitis, vesical tumor, calculus and ulcer, uretertis, ureteral stone, pyelonephritis, nephritis, renal tuberculosis,

calculus and tumor, hemorrhoids, rectal stricture or neoplasm, appendicitis and cholecystitis.

The various micturition and wash tests are of much practical clinical value, even though in many cases they only show that there is present somewhere a catarrhal condition of the urinary tract; properly conducted, they may even localize the source of the catarrh, but they must frequently fail in the nature of things when it comes to making a specific diagnosis. The three glass test is applied as follows: The patient urinates successively into two glasses. The first glass represents the urine plus contents of urethra; the second glass the urine as found in the bladder. The prostate is now expressed and the patient passes the remaining urine. The third glass shows the urine plus the prostatic secretion. In chronic prostatitis, as a rule, the first glass looks clear, containing filaments. The second glass is perfectly clear. The third glass cloudy. To obviate errors arising from contaminations of the anterior urethra, the patient is instructed to retain his water for several hours previous to the next visit. The anterior urethra is now irrigated by means of the hand syringe or the elastic catheter, with a boracic acid solution. If the urine passed after the washing is clear, anterior urethritis alone is present. If, however, it is clear with filaments or cloudy, posterior urethritis also is present. To exclude cystitis a narrow elastic catheter is introduced into the bladder, the organ washed out with warm boric acid solution. The catheter is closed and allowed to remain. At the end of an hour the urine accumulated in the bladder is discharged through the catheter. If the urine is clear, the implication of the bladder in the inflammatory process is excluded. In cystitis both glasses are cloudy; ammoniacal urine always means cystitis. In the case of an acid purulent urine, we consider pyelitis; if we can exclude tuberculosis, hypertrophy, stricture, calculus orneoplasm. Pus in the urine points to prostatitis or pyelitis; not to cystitis. On standing, pus coming from the kidney will form a fairly compact layer at the bottom, while the muco-pus from the bladder forms a more flocculent and larger layer overlying the renal pus.

When pyelonephritis is suspected, the following test is recommended: The three glass test is taken and the samples preserved. Urethra and bladder are now irrigated with warm boracic acid solution till the return flow is clear. An hour later the catheter empties the bladder. If now the urine is as cloudy as the second glass before washing, the diagnosis if pyelonephritis may be made, and must be confirmed by finding albumin and casts, deficient urea and solids, and micro-organisms.

Micturition and wash tests cannot distinguish between unilateral or bilateral disease. Residual urine without hypertrophy in the wake of gonorrhea is depended on for diagnosing contracture of the neck of the bladder. The micturition tests, the endoscope and bulbous bougie, are relied on for recognizing a urethritis, stricture, urethral papilloma, and granulations. The proctoscope and finger will show hemorrhoids, rectal stricture, or neoplasm. The epididymis is palpated, its contour and size noted. It is said in early syphilis nodules are felt in the globus major, while in tuberculosis the globus minor becomes nodular. A careful examination will not forget to look for the typical signs of hernia and varicocele, with the patient in the standing position. The possibility of systemic cord diseases is remembered, and the Argyll-Robertson pupil, Romberg's symptom, and patellar reflex inquired into as a matter of routine.

In regard to prostatic carinoma (that forming, according to Belfield, 7/8 of its tumors), Hawley says upon the data at present obtaining, early recognition is dependent upon three not wholly satisfactory phenomena, and these three alone, to-wit: Pain in or about the prostate, *areas of hardness* (stony hardness), and nodosity palpable from the rectum, and tenderness. In chronic seminal vesiculitis the vesicles may and may not be enlarged. The palpating finger gives thus not always positive information.

F. Schlagintweit has observed that the drops of secretion after prostatic massage, if

allowed to fall in a vessel filled with water, float on the surface, or hang suspended like long bags from the portion floating on the surface. Seminal secretion becomes opaque as soon as it touches the water. Pus sinks in yellowish flakes to the bottom.

We rely as a test on what follows: The patient's prostate is expressed; after he empties his bladder we irrigate the viscus and the urethra with a warm 1/10 per cent. solution of methylene blue by means of a catheter. The blue solution is allowed to escape, and the organ is now thoroughly washed with a warm boracic acid solution, four ounces of which, when done, are allowed to remain. We now express the seminal vesicles. The vesical contents are micturated or drawn with a catheter and submitted to the action of the centrifuge and microscope. If, besides the spermatozoa, pus cells and possibly bacteria are present, the diagnosis of spermatocystitis is established. We suspect the case in hand to be a tubercular vesiculitis, when there presents itself to the finger a more or less diffuse growth with irregular and not sensitive nodules, occupying the location of the vesicles, associated with other signs of tuberculosis, as nodulation of the globus minor and recurrent epididymitis, and tuberculosis elsewhere. As usual, the crucial test is the finding of the tubercle bacilli. While, as a rule, the stone searcher and the cystoscope are amply sufficient to determine the presence of a vesical calculus, we must rely on radiographs made by the expert for the finding of ureteral and renal calculus. A negative radiograph does not exclude calculus, as surgery has proven. Stones of a size smaller than orange seed are never shown by a radogriaph.

Robinson reports an interesting case where a radiograph had shown what appeared to be ureteral stones. On operation it was discovered that the supposed ureteral stones were phleboliths occupying the exact location and course of the ureter. He claims that a phlebolith casts a shodow of more definite contour and location than the ureteral calculus; besides, the phlebolith's shadows are liable to be bilateral, though in unequal numbers on each side.

Kelly's wax-tipped catheter has also frequently localized urethral stone in the female, besides determining the patency of the tube.

The cystoscope, correlated with lumbo-abdominal local symptoms and general conditions, will help us to form more or less accurate ideas as to the presence or absence of cystitis and vesical ulcer.

Tillman holds primary, even secondary, tuberculosis of the prostate to be very rare. The disease generally attacks young individuals. Its symptoms are those of chronic prostatitis. We look for evening temperature and loss of weight. Tubercular cystitis and prostatitis, as a rule, display a marked antipathy to silver nitrate solutions, and are correspondingly made more comfortable by bichloride solution, as instillations in the strength of from 1/20,000 to 1/10,000.

Caspar points out that, as a rule, other micro-organisms are absent in the presence of tubercle bacilli; hence a prostatitis or prostato-cystitis without the presence of any micro-organisms must be suspected to be tubercular in character. Smegma bacilli are without exception associated with various other forms of bacteria. A tubercular cystitis is excessively tender to the touch, intolerant of distention of the vesical walls and instrumentation. This loss of capacity may be due to cicatricial tissue contraction or cystospasm.

Fenwick says a large percentage of renal disease originates in the prostate and induces such agonizing prostate and bladder symptoms as to have deceived the most expert diagnostician and surgeon. Unilateral renal tuberculosis descending the ureter, chronic renal abscess or descending pyelitis of calculous origin, or stone fixed in the lower orifice of the ureter; all these induce difficulty of urination, great irritability of the bladder, and penile pain.

It has occurred not rarely that cases of prostatitis have been treated for cystitis or pyelonephritis. Unnecessary suprapubic

cystotomies and nephrotomies were the result. Even operators with exceptional opportunities for skilling themselves record cases of false diagnoses, leading the patient to the ordeal of undergoing unnecessary operations. So Morris nephrotomized under the diagnosis of renal calculus a number of cases that proved to be, one a prostatic abscess, another a prostatic calculus, another an encysted stone of the lower end of the ureter, pyelonephritis, disease of the caecum (appendix?), and stomach, and spinal disease. Morris, out of 26 instances, cut down on the kidney five times where manifest disease was located in other parts, and four times where apparently no discoverable cause existed in the kidney or elsewhere to account for subjective symptoms.

It is one of the very common occurrences to meet patients whose hemorrhoids have been surgically treated with the promise of curing that pain in the rectum. In cases of prostatitis the rectal pain remains, even though the rectum itself is in better shape, after a hemorrhoid operation. Ureteritis and ureteral stone are, as a rule, secondary to trouble below or above, or from adjoining organs, by pressure, continuity or contiguity. The cystoscope has to be called on again for the purpose of making a specific diagnosis between ureteritis and pyelonephritis, on the one hand, or disease confined to the bladder. Much direct information and inferences will be gained by the intrinsic study of the ureteral orifices. In a state of healthy they may be indistinguishable, save for their efflux, or they appear as delicate, flesh-colored lines at the extremity of the interureteral structure and almost above it. Their color and potency vary with the distention of the bladder. Especially in prostatic inflammation, they not so very rarely become buried behind the basal swelling. Fenwick observes if a kidney and ureter affected by chronic tuberculosis become inflamed, the kidney would retract underneath the ribs, and the ureter shorten; in consequence of this the ureteral orifice gets pulled out of its place.

In brief, the appearance of the ureteral orifices, their presence or absence in the cystoscopic view, the ureteral efflux, its force, frequency, rhythm, quantity, its freedom from blood, pus or chyle, unilateral or bilateral, will give us valuable evidences and inferences to form as to ureteritis, pyelonephritis, renal tuberculosis and calculus.

Hutchinson excised a normal vermiform appendix in a young man for attacks of what he and two physicians mistook for appendicitis. Ten days after the operation the patient passed a small renal calculus.

When experiencing difficulty of localizing the ureteral openings or observing their action, the writer has derived very much satisfaction by adopting a method described by Voelcker and Joseph. The demonstration is indeed one of surprising beauty in its results.

Four c.c. of a sterile 4 % normal saline solution of indigo, carmine, freshly prepared, are injected into the gluteal muscles. Within about twenty minutes the cystoscopic window will discover the intermittent jets of the now darkly colored urine, allowing fairly definite inferences as to the functionating power of each kidney. This test enables us to watch the ureteral efflux even when, as in prostatitis, hypertrophy or displaced pelvic organs, the ureteral openings cannot be brought within the visual cone. It is a simple and valuable test, and by empowering the observer to see has saved the patient from useless operations of an exploratory nature.

Echinococcus cysts must be mentioned as having occurred within or near the prostate. It appears to be a rarity of the first order.

In the foregoing the writer has endeavored to accentuate the importance of localization, as well as the necessity of recognizing associated pathology.

Intravesical segregators, like Luy's and Cathelin's, are occasionally employed for the purpose of receiving the urine separately from each kidney. They are somewhat uncertain in their results, for we cannot know with any degree of assurance whether they separate the urines or not. The injection of methylene blue will help to make these tests more reliable. The segregators are often em-

ployed with less pain than the ureteral catheters. The Harris instrument, equally unreliable, has the additional disadvantage of boring its prongs into the vesical mucosa, thus being liable to cause ecchymoses and ulcers. The cystoscope, as an easy, applicable, painless, harmless and direct-view-giving method, has distanced both the ureteral catheter and segregator. As Voelcker says: No method is infallible, because no man that operates the method is infallible. Despite the well-grounded criticisms of Israel as to the newer methods of testing renal sufficiency, Kümmel's record of only 4% mortality in 62 nephrectomies proves practically and conclusively the added value of the phloridzin test and cryoscopy of the urine and blood. But time for separate ureteral catheteral withdrawal of urine (with the catheters *in situ* for three or more hours), and the attendance of a skilled physiological chemist (absolutely necessary to make the latter tests valuable), are not always at our command, nor even desirable in operations not nephrectomies; provided we observe carefully the general clinical behavior and apply the ordinary urine tests and cystoscopy with indigo carmine injection.

Kapsammer has observed that even under normal conditions the kidneys do not secrete equal amounts of urine; the use of the ureteral catheter in itself exercises an influence on the secretion of the kidneys in causing a reflex olyguria or polyuria. He explains that the freezing point gives us a basis (uncertain) for the molecular concentration of all the organic and inorganic matter contained; the measurement of the electrical conduction gives us a criterion for the concentration of the inorganic constituents alone; he has not made any experiments with electrical conduction, because they probably would not furnish any more reliable results than cryoscopy. He instances among a number of cases one of bilateral pyelitis with very little renal parenchyma on one side, and greatly damaged on the other, and yet the freezing point showed normal. Another possible source of error is the escape of urine along the side of the catheter. The indigo carmine test is superior to methylene blue, because it is secreted non-changed, both indigo carmine and methylene blue tests are superior to cryoscopy. He proposes the subcutaneous injection of 0.01 phloridzin in a hot, boiled, watery solution (cold water precipitates phloridzin). Normally, sugar appears twelve to fifteen minutes after injection. If the sugar reaction shows twenty to thirty minutes *post injectionem*, renal function is disturbed. If the reaction is later than thirty minutes, nephrectomy is contraindicted. He tried without failure this process in seventy cases with thirty operations. It proved more reliable than the other methods. He sums up as the best methods:

1. Bilateral stimultaneous ureteral catheterization.
2. Phloridzin method.
3. Indigo carmine method.

There is but a limited sphere for the use of cryoscopy of urine and blood. He asks: What are the advantages of the new methods? And answers: In place of speculation, we have clear knowledge of facts; in place of hesitating, uncertain surgical intervention, we have a definitely planned operation method, according to indications, and last, but not least, we are enabled to make an early diagnosis, leading thus to early and successful operation. The new methods will enlarge the domain of nephrectomies at the expense of nephromies. A nephrectomy is better even in tubercular pyonephrosis of severe degree, as experience teaches that a nephrotomy does not cure obstruction, hence fistula and invalidism and early death follow. There is no reflex surgical anuria in nephrectomy, but insufficiency of the remaining kidney.

The positive diagnosis of prostatitis rests on the palpating finger, noting changes from the normal in the form, size, consistency, movability, sensibility, and also the prostatic secretion.

The prostatoscope shows increased tenderness, tendency to hemorrhage, general congestion, swelling of the caput.

A spontaneous tendency to hemorrhage and non-tolerance of silver instillations.

instrumental manipulations, arouse suspicions of tuberculosis. The prostatic secretion carefully collected is then submitted to microscopy, culture, and guinea pig experimentation, after the procedure of Belgard, as quoted by Caspar. "The guinea pigs get at first 0.5 of the Koch's tuberculin T.R. This is to prove that they were not tuberculous prior to the inoculation. If they are tuberculous, then this dose is deadly to them. If they are still alive several days after this injection, then we may assume, with a fair degree of certainty, that they are not tuberculous. In this case the one received an injection into the peritoneal cavity of the washed urinary sediment mixed in about 0.2 of sterile water. The other received the same quantity subcutaneously. If the urine contains tubercle bacilli, then we will find with absolute certainty in the latter, in from three to four weeks, large, even externally palpable, glands in the region of the fore and hind feet, according to the point at which one inoculated. The glands are already partly in a stage of cheesy degeneration, and contain tubercle bacilli.

The intraperitoneally inoculated guinea pigs develop a general miliary tuberculosis. They are killed after six weeks, and we find the characteristic nodules on the peritoneum, omentum, spleen, lungs, kidneys, or in single ones of these organs.

If we find neither glands in those were subcutaneously inoculated, nor nodules in those peritoneally moculated then we may be certain there were no tubercle bacilli present in the urine, and may say the purulent process in question is not tuberculous.

The tuberculin reaction cannot take the place of inoculation. It has been proven, by the recent investigation of Naegeli and others, that the large majority of all persons have tuberculous foci somewhere in the body without being tuberculous; consequently we have to differentiate between a real tuberculous disease and latent tuberculous foci which do not become noticeable.

The writer considers prostatitis and hypertrophy of the prostate as due to the same causes, and having the same pathology. But there is a clinical difference, and that is, whether the disease in the gland causes retention or not. If the catheter, after voluntary micturition, drains no urine, the case is looked upon as one of prostatitis; if residual urine exceeding four drams is present, the case is diagnosed as one of hypertrophy. If but a small amount of residual urine, from a few drops to say four drams, the residue may be due to a temporary cysto-spasm of the internal vesical sphincter or contracture of the vesical neck. The age of the patient is also taken into consideration.

If the means alluded to allow us to make a diagnosis of prostatitis and its complications, the prospect of a cure in a clinical sense it not so very bad; even in severe cases amelioration at least may be promised. It will be important to remember that it will take time and patience. Constant relapses, an undesirable but natural and regular occurrence, will test the sufferer's endurance; their frequency, however, will lessen as a methodical treatment persistently hammers at causes and effects. In cases that have exhausted the patience of the patient, that have resisted all previous forms of or perfect rest from treatment, instances where the continued presence of the diseased gland plainly and palpably undermines what is left of the patient's chances for survival, the choice will lie between prostatectomy and suprapubic perineal through drainage.

As usual, a mutilating operation like prostatectomy, performed in accordance with the laws that have evolved from its frequent application, will not only be, relatively speaking, the easiest thing for the surgeon to do, but it is also the only means of relief for a patient whose prostate, like a chronically ill appendix, is worse than useless. The operation definitely unmans the victim, but the disease has already anticipated that effect of the operation. In less desperate cases a suprapubic perineal through drainage operation might be our choice. Lydston claims good results from the method. The well-known beneficial effects of protracted drainage, putting the internal vesical sphincter out of commission for a time, the

always beneficial effects incidental to an enforced long rest and compulsory good behavior, will *á priori* support a plan which, in addition, permits of thorough palpation of bladder and prostrate, and makes additional surgery manifesting itself possible.

Zuckerkandl, in presenting a patient with chronic prostatitis, on whose prostate he had performed bilateral excisions, opines that in such cases, on account of the loss of the sexual function, a total prostatectomy was not to be considered; indications were only for incisions, excisions, partial destruction of the organ. Operative intervention was only allowable in cases resisting all lesser forms of treatment, as in cases of retention or such suffering from chronic septic infection. In the operation he aims to save the ejaculatory ducts and the urethra. Cone-shaped pieces are excised to prevent the gluing together of the edges. Tamponnade with moist iodoform gauze and permanent catheter. The microscope showed both pieces to be in a state of intensive chronic inflammation affecting equally the glandular and muscular parts. In the cortex the process was the most severe. Groups of glands were here, due to the massive infiltration in a state of purulent softening. Microorganisms could not be demonstrated.

Young (Baltimore) executed and advocated analogous procedures. When in doubt or fear of malignancy, early prostatectomy can be our only choice.

The less strenuous operation of perineal urethral prostatotomy combined with urethrotomy (internal and external) is our selection in those cases when a contracture or obstruction at the vesical neck coexists with strictures. A bilateral vasectomy in connection with this intervention, or as an independent measure, will await the action of our judgment.

Intrathyroideal parenchymatous injections, with a hypodermic syringe full of 5 % carbolic acid, have been a standard remedy at the Rush surgical clinic for a generation. In general, it must be said that parenchymatous injections are losing favor in surgery; abscess formation, embolism, and no results being some of their drawbacks.

Neiswanger[1] observed five cases, three of which were physicians, some time after prostatectomy done by eminent surgeons, without their having experienced a particle of relief from the ordeal they had passed through. He also came across three failures following a Bottini-Freudenberg operation. One of these had a Bottini done three times, without experiencing any improvement. Another was fatal—due to shock.

Evidence of this kind stimulates our efforts at specific diagnosis, and invites our attention all the more closely to measures of a non-cutting, at least not mutilating, character.

Neiswanger, divides his cases into those of irritable prostate and hypertrophy, and lays claim to very successful results. The positive pole is applied, when the prostate is irritable, to the prostatic urethra.

A hard rubber tube of convenient caliber, shaped like an ordinary urethral sound, is tunneled through its entire extent, except at its conical terminus. The last 1½ inches are perforated by a number of small holes. A copper electrode, whose end has been wrapped in cotton and dipped in sterile normal salt solution, is inserted inside the hard rubber tube; the latter is then introduced into the urethra in such manner that the perforated part comes to accurately lie within the prostatic lumen. The negative pole may be applied perineally. The current of a strength of from five to ten milliamperes is allowed to continue for ten minutes, and may then be changed to the slowly interrupted faradic current for a period of from three to five minutes. The copper electrode is sterilized by heat; the rubber tunneled sound by washing it in water and soap, and rinsing, and allowing it to remain in 95 % carbolic acid for a few minutes. It is rinsed in sterile water before use. Seances of this kind are time-taking, but have the advantage that but one visit a week is

[1] Lecture given during July, 1904, at the Illinois School of Electro-Therapeutics.

required. Three to five applications are necessary before visible and distinct improvement is manifested. Of course, he associated with this treatment the proper hygienic and dietary regimen, but claims to effect, even by depending upon this local treatment as the only intervention, a large number of succesful results. The *rationale* of the treatment, it is explained, consists in the generation of a nascent oxychloride of copper in proper dilution that acts as an astringent and germicide. It is also possible that the galvanic current by its cataphoric action insures a deeper effect that medicaments superficially applied by any of the conventional methods.

He emphasizes the fact that this is not a *true* hypertrophy, which would mean an enlargement of the normal cells composing the glands, but rather an accumulation of tissue due to inflammatory action. In a true hypertrophy we have nothing to *destroy,* and whoever attempts it impairs the function of the gland. In the cases under discussion, however, we have something to destroy and, therefore, he applies in the same manner a solution of potassium iodide, about 25 grains to the ounce of water, with the negative pole in the prostatic urethra. A current of ten milliamperes is allowed to continue for ten minutes. The negative pole is used here for its softening effects; besides, the iodine, being electro-negative, is repelled by that pole and seeks to join the positive one, placed over the perineo-anal region. Thus the endeavor is made to bathe the gland in a solution of iodine. The slowly interrupted faradic current then follows, to stimulate the detrusor, as a molecular massage, to increase absorption of the products of decomposition set free by the first part of the application. Repeat in from five to seven days.

The writer's experience endorses the usefulness of this method of treatment.

General faradization has often been of benefit.

Intraprostatic Franklinism has come to the writer's notice by observing long sound-shaped glass rods in the drawers of the offices of professional friends. Specific information, however of their indications and value was not obtained. A successful general practitioner and surgeon made credible assurances that ever since he treated his lady patients after inserting the conventional glycerine tampon to a static breeze or regular static treatment, they (his patients) had one and all expressed their satisfaction and professed more rapid progress of their respective cures. There is no one to doubt the harmlessness and generously good psychic effect of static electricity properly applied.

The writer had no opportunity to learn what evidence of progress phototherapy has to offer in the direction of prostatic therapeutics. The Roentgen ray has so far established no reputation of being able to successfully influence deep-seated parts, like the prostate.

The intraprostatic use of salves, medicated variously by means of cupped sounds and ointment syringes finds but few, if any, supporters of the day. The objections raised against their employment are that in their action they are difficult to localize; dirty; the instruments and salves troublesome to sterilize; besides, they do not contain any features that endoscopic application, instillations and injections of solutions are not possessed of.

Rectal suppositories are still rightly or wrongly universally applied. Ichthyol, ung. hydrarg., iodine, iodoform, europhen, are the remedies of choice.

Positive evidence as to direct effects on the prostate aside from those on the rectal mucous membrane and defecation, and the psychic effect, is wanting. But authority supports their use. Even intraprostatic suppositories, called urethral bougies, the base being cocoa butter or gelatine, or such like, are seen to find a sale to physicians in the market. The same objections as those directed against salves would seem to apply. There is also good authority advocating the use of iodine, potassium bromide, and other agents in the form of solutions by means of rectal injections. It must be admitted the method is inconvenient, and the general con-

stitutional effects of iodine, etc., are as readily obtained by the oral exhibition of the drug. Besides, positive proof of more direct effect on the prostate of remedies thus exhibited is lacking.

The names of Oberlaender and Kollman are connected with prostatic instruments dilating and irrigating conjointly. Their action is manifold. In moderate distention their effect is somewhat akin to an intraprostatic massage; the expressed follicular contents are immediately washed away. If a hot solution is employed, the beneficial, soothing, circulation-equalizing effects of heat come into play. If distended to the maximum of the patient's endurance, by a lucky accident, as it were, occluded or stenosed glandular orifices may be opened up to an extent sufficiently to effect proper permanent drainage subsequently. It is a little blind work, but surgery is nowhere excluded from this drawback at times. The intervals which must be allowed to elapse between séances with this instrument vary according to the extent to which the dilatation was carried, from one to four times a month.[1]

Others have lauded prostatoscopic applications of guaiacol. The writer has found it to be a soothing remedy, gently stimulating the sexual function, and unaccompanied by any of the disagreeable temporary after-effects following the silver nitrate and strong bichloride solutions.

Burkhardt recommends applications of sublimate alcohol, 2 to 5%, by means of the prostatoscope. In severer cases he puts the patient in the hospital and cauterizes the caput with the thermo-cautery, followed by painting the surface with tincture of iodine. The extraordinary severe reaction ensuing puts off the next treatment for ten days. Four to five treatments are said to be followed by much improvement. The objection to the last procedure is the intolerable suffering the patient is submtited to. Iodine in the posterior urethra in concentration always causes prolonged suffering as to urgency and frequency.

It is proper for us to always remember that not so infrequently the reputation of an author of a healing method is far superior to the merits or demerits of the method itself, and again we may not be capable of accomplishing by his method what the author does.

Progress is often expedited by changing the employment of the patient, as from a sedentary occupation to one requiring active exercise. To fill out intervals of periods when for reasons local treatment is or has to be intermitted, there is nothing like travel for the fastidious; in fact, for anybody; especially also when a depressed state of the mind and introspection call for measures of relief. Sanitaria and hospitals for ambulatory cases are not looked upon as desirable places; for the patient needs wholesome and purposeful employment, or, if not working, the rapidly changing scene of travel will prove of infinitely greater advantage. The ordinary expectant, masterful inactivity, or do nothing method of treatment is with regrettable frequency often adopted by the patient himself, who so long as there is nothing doing, dispenses with the expense and inconvenience of having an attendant watch to see what an outcome the natural unassisted forces of nature may have to show. The advertising charlatan who treats patients by mail and sends out harmless, colored and a little bitter tasting water, and pills, and perhaps a few suppositories and bougies, is also treating the patient on the expectant plan. He expects a great deal of nature, for diagnosis, and individualization of treatment are none of his concerns.

With wonderful unanimity all writers uphold systematic prostatic massage.

Feleki found gonococci nine years after infection in the prostatic mucosa. Zuckerkandl found the excised pieces of a case of prostatic disease of lang years' standing sterile. The writer recently examined some prostatic secretion of a case of three years'

[1] Sharp and Smith have manufactured an inexpensive irrigating dilator, needing no rubber cover, according to a design submitted by the writer, who adapted a Leonard uterine dilating irrigator to prostatic usage. The writer happened to see irrigating dilators sold under his name by other firms, which had not, however, followed out strictly and in detail the author's model.

standing, and found it to be absolutely sterile, as far as a microscopic examination proved.

The presumption is fair, perhaps, that the infection, in so far as it exists, is confined to the surface, the rest of the gland, as a rule, being sterile. Most chronic abscesses are sterile. So we do not rub microbes around when massaging a prostate (as a surgeon of international reputation once remarked to the writer), but we express follicular contents, that for anatomical reasons, cannot any more of their own account empty themselves. Digital massage acts as an intermittent drainage, equalizes the circulation, stimulates the involuntary muscles and nerves, and promotes thus absorption. Patients almost always express gratification for the comfort thus gained. That perineal pain is lessened, etc. Once a day is not too often, if the time can be found.

Feleki has devised an instrument, shaped so the patient can employ it himself for automassage. He claims extraordinary good results in his cases. Of late, vibratory massage, an electrical motor being the power, has been lauded here and there. The writer's experience does not enable him to give any endorsement whatsoever to this method, as applied to the prostate. Vibratory massage is a valuable measure for many cases of rectal disease, but properly massage the prostate it cannot.

To sterilize the surface, stimulate leucocytosis, soothe the exposed nerve endings, and promote normal epithelialization, we have recourse to instillations, preferably applied by means of Guyon's bulbous catheter. The Ultzmann silver catheter syringe, the prototype of the Guyon instrument, was useful in showing the way; but the localizinz bulb, elasticity and non-irritability of the Guyon catheter have displaced this one-time much valued instrument.

The patient empties his bladder; the catheter is introduced just beyond the compressor urethrae muscle; the last few drops of urine allowed to escape, and 1½ to 2 drams of solution instilled. To prevent the ever-present few drops of urine from so affecting our medicament as to make it worthless, as well as to cover the pathologic area, it will be necessary to instill more than just a few drops, and also to have our solutions of such chemical constitution that urine will not at all or at least not immediately decompose them. (We must go to ophthalmologists for the purpose of viewing the extraordinary beneficial effects of persistently applied medicaments to chronic diseases of the conjunctiva and cornea, and learn the difference of action between those various remedies, always subject to visual control.)

Argyrol, 15% solution; protargol, 10%; mercury bichloride, 1-20,000 to 1-10,000 in normal saline solution; collargol, ⅕ to 2%, answer these requirements, and are non-irritating. In suitable cases and doses they enhance the physicological forces and the immediate comfort of the patient. Argent. nitry. in 1% less or stronger solutions is always irritating, but its secondary effects are as good as its reputation here is time-honored. Cuprum sulphate appears always very irritating, and applicable only in exceptional cases. All vegetable agents like ergot, hamamelis, tannic acid, hydrastis, kino, krameria, depend on their superficial astringent effect principally, and are not antiseptic or alterative. Their use appears to be very limited. Neither have insoluble substances like bismuth subnitrate, on account of their danger of permanent precipitation, found much favor.

Goldberg, Cöln have shown by elaborate experiments and contemporaneous literature that the best, not to say the only, way to effect absolute sterilization is, as we all know, by boiling the catheters, etc. We will therefore boil everything that is to be used. If, however, what of course should never happen, the busy practitioner did not have time to boil, the writer would suggest the following plan as better than nothing, and minimizing, if not excluding, danger from the use of an infected catheter. The lumen of the catheter is held after use immediately underneath the running hot water faucet for two minutes or so, and washed without soap. A 1-1,000 solution of

oxycyanide of mercury with borax is then several times injected through its lumen, and a copper wire previously sponged with the same solution introduced throughout its length. The catheter, whose external surface has been thoroughly sponged with the mercury solution, is placed in a clean glass tube, corked at one end, when the latter is filled with the mercury solution, and now corked at the other end also. A catheter, after having remained in that solution and thus kept for twenty-four hours, and for twenty-four hours longer in the same glass tube without the mercury solution, the corks having been replaced by cotton, was found to be sterile.[1].

Changing off with instillations or preceding them, comes the employment of the sound; always temporarily grateful to the patient. The sound distends the whole of the urethral canal, and acts in part as an intraurethral massage and part as dilator, promoting absorption.

The psychrophore does not commend itself for our endorsement, for the reason that the frequent exhibition of an intraurethral instrument by the patient himself would even after teaching asepsis soon lead to additional infection; but apparatus[2] by means of which first hot and finally cold water can be applied to the prostate, per rectum, by the patient himself, has all arguments in its favor. It forms one of the most important parts of the treatment. The continuity of effect, if faithfully employed by the patient once or twice every day, has the most beneficial results. Perineal counter-irritation, especially at the always recurring times of exacerbation, by means of tincture of iodine, has proven a useful and trustworthy adjuvant.

As to sexual intercourse among the married, absolute continence must be counselled so long as patients feel in any way the worse after the act. Otherwise an economical use of this function at rare intervals may seem the better plan. The sexual organ massages the prostate in a manner that none of the artificial mechanics or decongestants in any way can expect to equal. It is a case of nature versus art. Note the difference in the amount of expressed secretion in a patient affected with prostatorrhea if massaged before or within ten hours after sexual congress.

The all-powerful influence exerted by sane ways of thinking, associating, working, eating, drinking, exercising (exercise by walking on rubber heels briskly, and a comfortable distance is one of our standbys), sleeping in ventilated rooms, must be mentioned, because so obviously and constantly disregarded. The daily morning bath, as cool as the patient can stand comfortably, deserves especial mention. Rhubarb, tea and coffee, on account of the large amount of oxalic acid and tendency to lime oxalate stone formation, should be discriminated against. Indeed, had the patient lived right in the first place, there would hardly be any excuse for this paper. If the patient is a drinker or smoker, he must gradually be instructed to appreciate the deoxidizing injurious effects of these slovenly and demoralizing habits.

Prostatics must limit their meat supply and always eat a little less of everything than their appetite calls for. The bowel function is kept normal by eating slowly, fruit, and proper exercise; perhaps daily bowel washes for a period. Pills and physics are tabooed, as a rule. Of internal specific medication, so far as the prostate is concerned, no remedy has proven incontestably any claim for such a place. Ergot does not contract disorganized muscles. Yet one studying Livingston's article would feel tempted, especially in the neurotic variety of prostatics, to employ ergot according to his specific directions. Saw Palmetto does

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[1] Columbus Medical Laboratory, Chicago, August 18, 1904. Dr. F. A. Leusman:—Dear Sir; The specimen of instrument from—shows the entire instrument was sterile outside as well as the lumen. Very Respectfully,
Columbus Medical Laboratory.

[2] Sharp and Smith have manufactured, according to the writer's design, an instrument similar in outline to Kreissl's that can be used as an apparatus for conveying the effects of heat and cold as well as for auto-massage of the prostate. It can be had with a single or double outlet tube. The latter pattern is the more desirable one. The papient prepares two 1 gallon fountain bags-one filled with hot water and then connects the rubber tubes with the inlets, and can thus with the help of stop-cocks alternately or successfully apply the beneficient effects of heat and cold in the most convenient manner possible. It is equally efficient for auto-massage.

seem to stimulate the sexual function, but we are warned not to use the drug for too extended a period, because it will influence the kidneys. In other words, it is an irritant and of very limited, if any, use. The balsamics, such as oil of sandalwood, etc., are out of the question in chronic cases. The reconstructives, like maltine, hypophosphites, good cod liver oil during the winter in the case of the emaciated; digestants when indicated, even strychnine in the atonic, intermittently, may be fully advised. During periods of exacerbations sodium or potassium bicarbonate is grateful to an individual tantalized by frequent and painful micturition. Sodium bicarbonate, less efficient than the potassium bicarbonate, disturbs the stomach less. Urotropin (and its congeners) is badly borne by chronic use, nor does its chronic use seem to influence prostatic conditions; the more chronic the prostatique, the better is he off without it.

Camphor monobromide and sodium bromide for sedating the nervous system of these unfortunates and quieting the at times abnormal sexual impulse, are among our standard remedies exhibited at intervals.

A suppository containing 10 grains of antipyrine has proven of value by relieving exacerbation of prostatic pain felt in the rectum, the patient using one to four a day at such times, and stopping their use immediately when amelioration occurs. Suppositories containing opium, morphine, belladonna, hyoscyamus, cannot too strongly be warned against on account of the inhibitory action which they exercise on the kidneys; never quite normal, and frequently already varying states of pyelitis, nephritis and renal insufficiency.

Like a preparatory, efficiently performed trachelorraphy and perineorrhaphy in gynecology, or a bilateral radical tonsillectomy in naso-pharyngeal catarrh, have oftentimes improved the patients to such an extent as to make further measures contemplated unnecessary by reason of the wonderful improvement following these preliminary operative proceedures, so, in an analogous way, prostatics have often hardly needed any further treatment after properly executed urethrotomy, internal or external, as the location of the strictures demands, varicocele and phimosis operations, vasectomy and rectal trimming. The writer wishes, from the experience gained in his own practice, to substantiate this well-known clinical fact of great benefit following such intervention. If strictures are cut, sounding for one year must follow.

In conclusion, a few cases occurring in his private practice have been appended for illustration.

Mr. H. N., referred by Dr. Bervin; aged 18; clerk, scarlet fever at 13; emaciated; unable to work for the past two years; three or four attacks of hematuria. Examination showed very muddy urine, tender prostate, uneven in contour and consistency; left vesicle enlarged. Heller's test marks a quarter inch albumin, a few hyaline and granular casts. Complains that he had to pass water every hour at night; when trying to pass water the stream would be intermittently shut off several times. Several months sounding had produced no benefit. Internal urethrotomy at office, March 20, 1903. Cut all strictures properly, followed by immediate relief from cysto-spasm; urine cleared up six months after operation. About February 25, 1904, when the writer demonstrated the patient before the Chicago Urological Society, an ulcer could be seen larger than a five cent piece, with irregular border radiating in various directions, located at about the middle of the vesical mucosa lining the anterior wall of the bladder; posteriorly above laterally to the trigonum the vessels could not be seen in places, that appeared of a very dark red color in marked contrast to the normal light yellow shade. The assumption of a submucous hemorrhage might serve to explain the cause of these dark places; receives from now on a three ounce intravesical injection of hot collargol solution, 1-1500, three times a week. September 25th, 1904: Patient looks well nourished; no albumin; feels well and strong, after continuous treatment with daily morning bath, little or no

meat diet, plenty of milk and raw eggs, raw fruit, bread and butter, no tea or coffee, Epsom salts twice a weak, never ceasing stream of reconstructives; takes ichthyol now; passes water once at night; is well satisfied with progress. Ulcer healed.

Mr. E. Z. W., bookkeeper; 28; single; six feet, two and one-half inches; 145 pounds; referred by Mr. Carl Grenaeus; medical student. When first seen, May 14, 1904, he complained about morning drop, with increase of this discharge after sexual intercourse; every day intermittent pain felt one inch from meatus on dorsum of penis. Pain like prick of pin on sitting down; sensation of heat; occasionally pain and very rarely pulsation back of scrotum in front of anus. After sexual congress all these complaints increased, even erections would make them worse. General health failing. No consumption in family. Six years ago had gonorrhea. Suffered a second attack four years ago. Last time he was thus afflicted (so he thinks), ten months ago. Observed cloudy urine for past year and a half. Thinks his prostatitis due to strong injections.

Examination revealed strictures in anterior urethra, bilateral varicocele with sufficient subjective symptoms to compel him to wear a suspensory bandage; enlarged (size of pigeon's egg) and tender left inguinal gland, and a well-marked case of hemorrhoids, and anal fissure. Tender, irregular, enlarged prostate; tender and palpable vesicles. August 10, 1904: Operation, at German-American Hospital. Resection of both varicoceles; removal of inguinal gland; internal and proper urethrotomy of all strictures; removal of hemorrhoids and fissure by clamp and cautery. Attempt at violent hemorrhage after stricture cutting; immediate control by manual pressure. Special nurse with patient for two days and nights; instructed to apply manual pressure the moment bleeding began. Chloride of calcium in twenty grain doses in water, four to six times a day, for two days. Patient lost only a little blood when urinating. Primary union. Patient left hospital ten days later.

September 24th: Much improved; morning drop gone; sounding continued; uses the writer's prostatic hydrophore and auto-masseur. Prostate and vesicles have lost their tenderness. Takes ichthyol. Morning bath (cool), and simple fare. Deep breathing; energetic walks; sleeps with open windows.

November 22, 1904: Appendectomy at German-American Hospital, of four inch long appendix, distended with fecal matter. Left hospital in eight days.

Mr. A. H. F. McG., referred by a former urethrotomized patient; Akron, Ohio; thirty; manager of factory; single; principal complaint, when desiring to pass water, the stream shuts off on him, and he has to wait minutes before it will start again. General health failing. One of the previous physicians had diagnosed stone in the bldader. Examination shows strictures of 39 F. caliber; 38 bulbous bougie would not discover them. Tender prostate.

April 25, 1895: Internal urethrotomy and rectal trimming at Passavant Memorial hospital. Dr. Waters, who was present, and then Dr. Fenger's assistant, remarked that Dr. Fenger would not cut a urethra admitting a French 38 sound easily. The writer replied that he regretted to place his indications for operative intervention in this case in opposition to such weighty authority; yet, as it was he had formulated some conclusions on personal experience and judgment, he would therefore proceed according to the latter. All strictures properly cut. Patient left hospital after two weeks' stay. Immediate relief of cysto-spasm. Patient seen again one year later, looking and feeling well, pleased with results, and presented his bride.

Mr. L. V. B. R., aged 15; gonorrheal posterior urethritis for past three months or more; muddy urine; rest in bed at Passavant Memorial Hospital from January 8th. to January 24th, 1903. Liquid diet; salines; bowel wash; ichthyol suppositories; Ol. Santali in twenty minim doses three times a day. Subjective symptoms very slightly improved; urine remains muddy; resumes clerking; no improvement; retires to a ranch three

months later. Two months' ranch life and work cured him.

Mr. F. K., referred by Dr. E. J. Fischer; politician; 29; looks the picture of health, January, 1898; hot prostate; muddy urine; intolerably frequent micturition. Sounding; Guyon's silver instillations. August, 1898; internal urethrotomy and rectal trimming at Augustana Hospital. Improvement of subjective symptoms. Presented patient before Chicago Medical Society some time in 1900. Continued treatment with sound, irrigating dilator, Guyon's instillations, massage, pichi, urotropin, no meat, affecting amelioration to the extent that in place of getting up every hour at night to pass water he could manage with from one to two risings. Patient stopped treatment December, 1903. Seen September 23, 1904. Has to rise three to four times at night; urine clear; got married a few days ago.

Mr. G. W.; 50; school superintendent; single; no residual urine; hot prostate. Bilateral vasectomy, German Hospital, Nov., 1898, followed by treatment individualized to the patient. Dismissed improved.

Mr. J. W.; 34; assistant superintendent. Resection of varicocele; internal stricture operation; rectal trimming at German Hospital, June 13th, 1900. Had been ill then with prostatitis for twelve years. Last seen Sept. 24, 1904. Prostate still very tender; patient entertains idea of prostatecomy, but the writer's judgment does not as yet favor this operation.

Mr. G. E. G.; referred by Dr. Hunnemann; aged 30; mechanic. Gleet and sexual weakness of several years' standing. Internal urethrotomy at office, 1902. Sounded and massaged prostate for a little more than a year, when patient declared himself well.

"Myself when young did eagerly frequent
Doctor and Saint and heard great argument
About it and about: but evermore
Came out by the same door wherein I went."

"With them the seed of wisdom did I sow,
And with mine own hand wrought to make it grow;
And this was all the harvest that I reaped—
I came like water and like wind I go."
—Omar Khayyam.

"All great literature is skeptical. I mean that the highest dramatic or poetic composition has for its central figure or hero a skeptic, as, for instance, the Prometheus of Aeschylus, who defied Zeus; the Faust of Goethe, the Hamlet of Shakespeare, the wonder-working Magician of Chalderon and the Manfred of Byron."—Mangasarian.

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Discussion on the Paper of Dr. Frederick Leusman.

Dr. ————: I want to emphasize one or two points brought out in this paper. As the essayist has said, we must pay some attention to the patient's own description of his feelings and sensations, although the patient's vocabulary is sometimes inadequate to express some of the sensations he has. Patients with prostatitis have a good many symptoms, and only by paying attention to their description of the symptoms can we treat them intelligently.

Notwithstanding the universal popularity of prostatic massage, there are some cases of prostatitis that are not benefitted by it, even after prolonged treatment, and many patients are made to feel worse for a considerable time thereafter, and in those cases in which massage seems to do damage, it should be discontinued.

I would like to emphasize the beneficial effect of hot rectal injections in these cases, as I believe they do more good in prostatitis than anything else I have tried. In fact, I think nature has a good deal to do with the healing of prostatitis, and the physician can help nature along by teaching the patient how to use these injections per rectum. The water should be applied as hot as can be borne, say 120 degrees Fahrenheit, and in my own experience I have found in most cases that hot water is more beneficial than cold. In these cases there are varied kinds of pain and discomfort, and it is necessary to take considerable time, if the patient expects to get well. He should take a hot rectal injection whenever he feels discomfort in the prostate, the rectum, anus, perineum, or wherever pain happens to be situated. Not only the local effect of hot water is beneficial, but the injection washes away small particles of feces, and it is astonishing what suffering the feces sometimes cause in cases of prostatitis, but I do not think it is advisable to give cathartics too freely, because they cause constipation, and this in turn produces a tenesmus, which is almost as painful as the presence of feces.

Discussion on the Paper of Dr. Frederick Leusman.

Dr. A. W. Baer: If I understand the Doctor's paper rightly, it was a plea for prostatic massage in preference to the knife. I do not know which is the worse. I do not see how, in the majority of cases, massage would be beneficial outside of relieving the follicles that were engorged, and it would be hard to depend upon the patient to do that with any instrument. One would have to do it with the finger.

The static treatment was mentioned, with high frequency, as being beneficial in these cases. Personally, I use the continuous current as employed by Neumann, in cases of urethral strictures, and have always used the negative pole. From analogy, one might reason that the positive pole would be more beneficial because of its stimulating action, but it will always contract the urethra, so that we will have to take the urine away by means of a catheter, and the negative pole, in the majority of cases, gives more relief than anything I have used.

Dr. A. H. Ferguson: I was very much pleased with and interested in the paper of Dr. Leusman. It has brought forth a great number of points that are of interest to the general practitioner, to the genito-urinary surgeon, and to

the general surgeon. I was also pleased to notice that he made reference to the work of Ciechanowski, with regard to the etiology of hypertrophy of the prostate, and if we consider prostatitis, whether acute or chronic, to be due to some infection, as he and a number of others maintain, then we have to treat prostatitis from the beginning to its termination as an inflammatory condition.

For practical purposes we should divide inflammation of the prostate into two great classes, and subdivide them, namely, the acute and chronic.

The remarks that have been made already with regard to the treatment of acute cases—rest in bed, internal medication, alteration of the acidity of the urine, rectal injections, etc., in place.

Then come the subacute cases, which pursue a chronic course, and the treatment that has been outlined by Dr. Leusman is all right. I have had a number of cases of prostatitis where I hesitated to recommend radical procedures, as for instance, in men forty years of age. In some of these cases irrigation, getting rid of the foul residual urine, and relieving irritation around the neck of the bladder and prostate, will allow these men to go on with comfort for months and months. We follow the case up, we may introduce sounds and use electricity, and yet in spite of everything we do or everything that has been done in that line, the enlarged prostate persists and obstructs the urinary flow. Then the indication for catheter life or prostatectomy is presented I advise the latter as the safer of the two, and this only rational treatment. How does it obstruct urinary flow? It may be by a bar; it may be by an enlargement of the middle lobe; it may be by an enlargement of one or both lobes pressing in towards the other and compressing the urethra laterally, and then what have we to do?

The Bottini operation, has a very limited field. It has had its initiation, its rise and its fall, and in the struggle of its fall it has hung on to a few pathological conditions in very old men, who cannot stand an anaesthetic, where the operation is done simply for the severance of a bar, but not for the removal of an enlarged middle lobe, not where the enlargement is overhanging the prostatic urethra; not where the enlargement is lateral. The Bottini operation in such cases is worse than useless. It is simply dangerous. Then what have we to do? We have to remove the prostate.

In an experience embracing sixty cases operated by the perineal route, and twenty-six by the suprapubic, I prefer the former because I have lost less cases by it than I have by the suprapubic route. It is unecessary for me to go into the method of performing the operation at this time, which means the development of prostatectomy. Suffice it to say, after the removal of the two lateral lobes the ejaculatory ducts ought to be avoided first. Then I prefer a median incision, so as to avoid these ducts getting into the bladder, and removing the middle lobe. You can remove the middle lobe in one of two ways, and one is to go directly inside of the bladder through the prostate urethra, and internal vesical meatus, and attack it from within. With small pedicle, or even with one of considerable size, you can thus successfully take it away. If, however, the middle lobe is broad, you had better reach it from below the prostatic urethra, and follow through its substance and remove it without going into the bladder. Then come the overhanging portions of the middle lobe, which block the internal meatus. These had better be removed laterally, following the prostatic urethra to one side or to the other, or to both.

A great deal could be said with regard to the different methods of technique that have been proposed, and of the different ways in which the after-treatment should be carried out, but my time is up. This subject requires much serious consideration on the part of the whole profession.

Dr. Leusman (closing the discussion): I wish to thank those gentlemen who have taken the trouble to discuss my paper. I have not very much to add to what I have already said, as the paper embodies some of the conclusions I arrived at some time ago in regard to this subject, and I could not and do not expect to come before a body of men, read a paper rapidly, and expect them to grasp its meaning as well as the man who wrote it.

In reference to the remarks made by Dr. Baer, I did not make a plea for massage of the prostate, but the principal object of my paper was to **bring before your vision** the different forms of prostatitis and their treatment, and in doing so I took a little different course from what is usually pursued, namely, instead of beginning with injections and winding up with prostatectomy, I thought I would begin with prostatectomy and wind up with injections.

As to the remarks made by Dr. Ferguson, he knows what he is talking about when he referred to the use of drugs, but I did not go into that phase of the subject, dealing with the choice of forms of prostatectomy, nor did I go extensively into the details of any mode of treatment, but simply tried to bring out the choice of methods, and when to apply them, and this is of interest not only to the surgeon, but the patient also has something to say about it. It was only yesterday that I met a professional friend of mine at Sharp & Smith's, who knew I was going to appear here to-night, and he said to me, "What do you do when you remove a prostate and the patient returns to you a year later and you find you cannot get any kind of instrument in the prostate?" I said to him, "I always think twice before I cut a prostate out." And that is the way I treat my urethrotomy patients. I sound my patients at intervals for one year afterwards. If you cut a stricture or remove a prostate, you should sound your patient at intervals for one year afterwards, and you will have no recurrent strictures. You must individualize your treatment.

I do not wish to be understood as supporting massage of the prostate and saying that it is the only remedy in these cases. It is only one

of the many forms of treatment of this disease. I am not one of the medical Popes, and while I think a good deal of benefit may be derived from the wise use of massage, I want to say that massage alone does not effect a cure in these cases. It may help to bring about a marked improvement in suitable cases. Furthermore, I think Drs. Ferguson, Ochsner, and Dr. Murphy, and many others will agree with me and support me in saying that prostatectomy does not always cure. Remember that. No, prostatectomy does not always bring about a cure. It sometimes makes patients worse than they were before. It is not a sure thing, by any means.

If I were certain that prostatectomy would effect a cure in all cases, I would cut out all other forms of treatment I have mentioned and throw them away.

As to hypertrophy of the prostate and prostatitis, I think I made a clinical distinction between the two. The case may be considered one of hypertrophy of the prostate when we have a residual urine of four or more drams and a case may be considered one of prostatitis when we have less than that amount or no residual urine. If a case is one of prostatitis, and does not get better by other methods of of treatment, then I say, "Out with the prostate." I thank you.

I also wanted to state that hot water injections of the rectum do not and cannot take the place of instruments that convey cold or heat there, without soaking and deranging the rectal mucous membrane.

DR. J. B. MURPHY'S TECHNIC FOR ABDOMINAL HYSTERECTOMY.

BY JAMES M. NEFF, M. D., CHICAGO.

The method of abdominal hysterectomy herein described has been used by Dr. Murphy for the past two and a half years. It so greatly simplifies the operation and possesses so many points of advantage over the commonly accepted methods that we have become convinced of its superiority.

The generally adopted line of procedure, from the anterior side of the uterus, involves a number of difficulties and possible dangers which we believe are obviated by the newer posterior method. The most serious of these is that of injury to the ureters, which lie close to the sides of the corporo-cervical junction and anterior to it. Because of their proximity to the uterus, one of the ureters may be included in the mass ligature, when the latter is passed around the uterine artery from in front or it may be divided by the anterior incision through the corporo-cervical junction. That these accidents are possible is proven by the fact that certain advocates of the anterior operation, place catheters in the ureters as a preliminary procedure.

Another danger in the anterior method is the occurrence of secondary hemorrhage, caused by the slipping or loosening of a mass ligature, which includes not only the uterine or ovarian arteries but a considerable quantity of the surrounding connective tissue. This is more likely to happen when cat gut is used than with inabsorbable materials as the cat gut is quickly attacked by the tissues and becomes soft and slippery within a short time after its insertion: even chromicized cat gut may be irregularly absorbed and give way before coagulation has taken place in the vessels.

The ideal method of controlling hemorrhage from the uterine and ovarian arteries, therefore, and the one which we employ in this operation, is the ligation of the isolated vessels. This renders secondary hemorrhage practically an impossibility.

The technic of the posterior operation in detail, is as follows:

(1) *Aseptic preparation* of the abdomen and vagina.

(2) *Trendelenburg position.*

(3) *Abdominal incision.* A vertical incision, 5 to 8 inches long, is made through the inner border of the sheath of the left rectus muscle. The fibres of the muscle are separated with the handle of the scalpel and the peritoneum divided on the slant between the two tissue forceps which hold it. The incision is never made through the linea alba and no muscle fibres are cut.

(4) *Examination of the pelvic organs.* The uterus, ovaries and tubes are carefully examined, to determine the exact nature and extent of disease and the line of procedure to be followed.

(5) *Protection of the general peritoneal cavity and displacement of the intestines out*

of the field of operation. This is accomplished by means of laparotomy pads.

(6) Separation of adhesions, if any exist, between the uterus and surrounding structures. If the omentum is adherent it is ligated close to the uterus and divided. Intestinal adhesions are separated by blunt dissection, care being taken to always work in the direction of the adherent coil, thereby adding to the thickness of the intestinal wall and avoiding perforation.

(7) *Securing control of the uterus.* For this purpose we use a large "cork-screw" which is inserted deep into the upper portion of the myomatous uterus. If the uterine fundus be the seat of malignant disease, and the tissue is friable, or if the 'operation' is done for cancer of the cervix where the fundus is not enlarged, heavy vulsellum forceps can be used to better advantage.

(8) *Clamping the broad ligaments.* By forward and downward traction on the "cork screw" the uterus is drawn into the abdominal incision with its posterior surface upper-

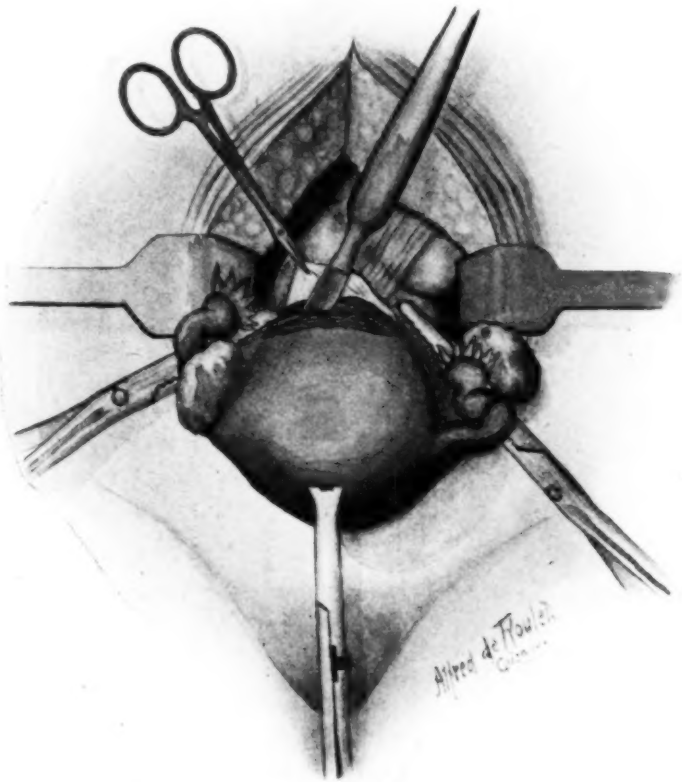

FIGURE I.—Showing posterior incision through the corporo-cervical junction.

most. Long heavy hysterectomy clamps are now applied to the broad ligaments close to the sides of the uterus, the ends of the blades extending down to the corporo-cervical junction but not including the uterine arteries. There is no danger of injuring the ureters in this step of the operation if care be taken to place the ends of the clamps in direct con-

tact with the uterus, above the level of the arteries.

If the tubes are diseased they are removed with the uterus by dividing the meso-salpinx of each before applying the clamps to the ligaments. If healthy, however, their uterine ends may be included in the grasp of the forceps and both tubes allowed to remain. In patients who have not reached the menopause the ovaries, or at least one of them should always be retained. This is absolutely essential to the future welfare of the patient and is nearly always possible. Even when both ovaries are diseased it is possible by resection of the affected parts to preserve a portion of one or of both.

(9) *Division of the broad ligaments.* The ligaments are divided with the scissors ¼ inch to the inner side of the clamps and the uterus, which is now liberated from its lateral attachments, is rotated downward and forward by traction on the "cork screw." This brings the posterior surface well into the fields of operation.

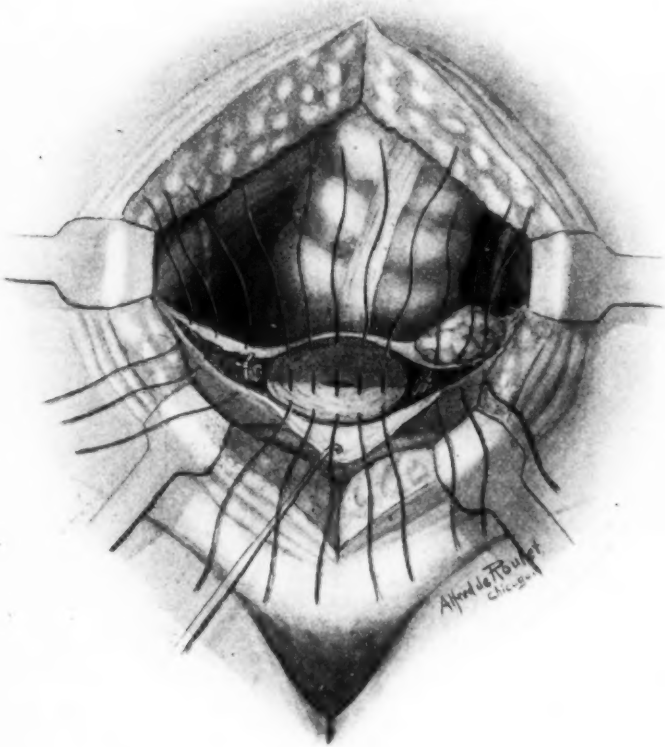

FIGURE II.—Showing the cervical sutures in place.

(10) *Incision through the corporo-cervical junction.* A transverse incision is made with the scalpel into the posterior wall of the uterus at the corpo-cervical junction (Fig. I.) and the cut edge of the peritoneum is secured with artery forceps. This incision is directed forward and slightly downward as far as the cervical canal, the division of the

tissue being aided by strong downward traction on the fundus. The uterine arteries now come into view on each side and are secured with artery forceps before they are cut. Should they not be plainly visible however no time is spent in looking for them. From the level of the canal the incision is continued through the cervical tissue, the operator drawing the uterus forward as he proceeds and rolling it away from the anterior peritoneum and bladder. In this way a peritoneal flap is formed, which is sufficiently large to cover the cervical stump. If the uterine arteries are not clamped before they are divided, the assistant secures them with hemostatic forceps when they begin to bleed while the operator continues his incision.

(11) *Ligation of the uterine arteries.* The isolated arteries are ligated with No. 2 cat gut and the forceps which secured them are then removed.

(12) *Suture of the cervix.* The wedge shaped gap in the cervix is closed with interrupted cat gut sutures, which approximate the cut surfaces but do not include the peritoneum. (Fig. II.)

(13) *Treatment of the broad ligament stumps.* The broad ligament stumps may be treated in two ways: (a) By ligature *en masse,* (b) By ligation of the individual vessels. The later method we consider preferable. When the mass ligature is used it should be tied in the crease produced by the clamp for the following reasons:

(1) The compression of the clamp forces out all of the fatty and areolar tissue, leaving nothing but the vessels and peritoneum within its grasp.

(2) The clamp acts as an angiotribe by injuring the intima of the vessels and thereby favoring clot formation within their lumina.

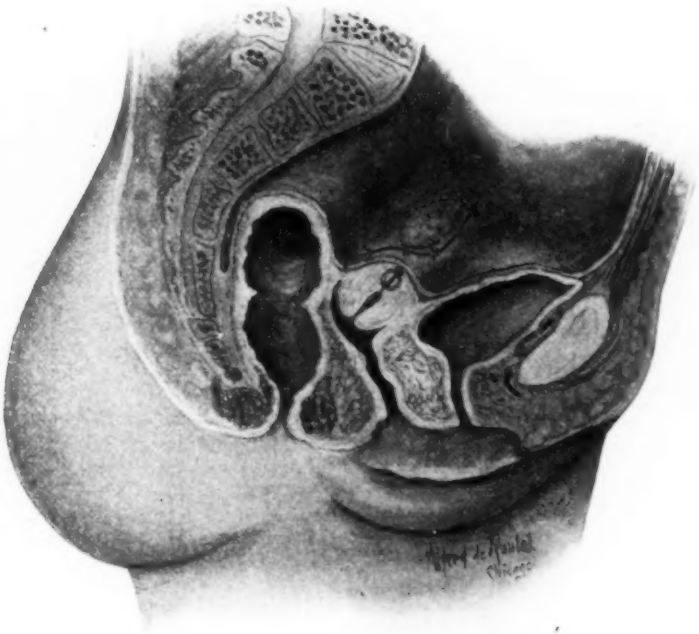

FIGURE III.—Showing the cervical sutures tied and abraded surface covered with peritoneum.

(3) The ridge of tissue between the crease and the cut edge of the ligament, prevents the ligature from slipping.

While the mass ligature has given perfect satisfaction, we believe the better plan is to ligate the individual vessels, after the clamp has been removed.

(14) Covering the abraded surfaces with peritoneum. Commencing with the broad ligament stump on one side, a purse string suture of cat gut is inserted around it and the stump buried beneath the peritoneum. The same strand is used as a continuous Lembert suture to approximate the anterior vesico-uterine flap to the posterior edge of peritoneum. When the broad ligament stump on the opposite side is reached, it is buried in the same manner as the first. (Fig. III.)

(15) *Cleansing the peritoneal cavity.* Blood clots are removed by dry sponging and the laparotomy pads are counted as they are taken out.

(16) *Prevention of adhesions to the lines of suture.* The sigmoid is turned down and placed over the line of suture in order to prevent the omentum from becoming adherent in the pelvis. This is of the greatest importance in all pelvic operations as the omentum, fixed in this situation may give rise to much suffering afterward. A case recently operated on may be cited as an illustration. The patient had undergone a double oophorectomy several years ago, for some pelvic disorder. She recovered from the operation but soon afterward began to suffer constant abdominal pain and gradually developed symptoms of dilatation of the stomach. At the second operation, enormous gastrectasis was found, the greater curvature of the stomach extending down to the level of the symphisis and firmly fixed in this position by the contracted, adherent omentum.

(17) *Closure of the abdominal incision.* After drawing the omentum over the small intestine the abdomen is closed by suturing separately the peritoneum, fascia of the rectus and skin. Heavy cat gut is used for the buried sutures and horse hair for the skin. "Figure of 8" silkworm gut sutures are then inserted through the skin and fascia, to insure against separation of the wound in case the cat gut be prematurely absorbed.

When the patient is returned to her room she is placed in a semi-sitting position and if at all depressed, is given two pints of normal saline solution per rectum, every two hours. These enemata are given slowly so that the fluid is absorbed almost as rapidly as it enters the bowel. The skin sutures are removed on the tenth or twelfth day, and the patient is allowed out of bed at the end of two and a half weeks.

While the method described above relates to large myomata, which cannot be enucleated, it is just as applicable to carcinoma of the fundus or cervix. In the malignant cases the cervix is removed with the fundus by making the primary incision through the posterior vaginal vault instead of the corpo-cervical junction.

If the fibroid extends into the broad ligament, the incision of its capsule should always be made on the posterior surface and the tumor enucleated through the posterior wall of the ligament.

The advantages of the method may be summed up as follows:

(1) The tumor and uterus can be removed about as readily and as rapidly as an ordinary ovarian cyst, the average time required for the entire operation being from 15 to 30 minutes. Most of the time is consumed in covering the abraded surfaces with peritoneum.

(2) The danger of injury to the ureters is reduced to the minimum, by rolling, instead of cutting, the uterus out of the surrounding connective tissue, thus following the natural lines of separation.

(3) There is practically no danger of secondary hemorrhage, as each vessel is ligated separately.

A SIMPLE METHOD FOR GASTRO-ENTEROSTOMY, URETERAL AND INTESTINAL ANASTAMOSIS.*

BY H. M. HEPPERLEN, M. D., BEATRICE, NEB.

At our meeting last year, I read a paper on "A Simple Method of Intestinal Anastamosis." Since then I have experimented along the same line, extending my method to gastro-enterostomies and ureteral anastamosis, which has been so satisfactory to me that I take the liberty to present this paper in further explanation of my work and research.

To further the progress of surgery, new ideas and methods are being daily conceived which are serving to bring the science more nearly a state of perfection, but to reach such a state, we shall be compelled to exchange our old ideas for the new, and thereby keep abreast of the times.

While I do not maintain my method for the above operations is perfect, and only hope before the next session of this assembly, some method may be devised that will far surpass the one I present to-day, for the present I will state, I have studied extensively and applied generally the different theories and appliances for this work, with the result that I am convinced that by my method, the work can be done in a shorter time, with less manipulation of the parts, and more securely than by any method of which I know.

During my work in the past, it was always with dread that I made an anastamosis of any of the internal organs, and before commencing the work, the method I should choose was hard to decide upon.

Having examined the different methods requiring simply a needle and thread, which we always have at hand when performing abdominal operations, and found the complications with some and time required with others, I have been lead to abandon the practice of trying to work without some support over which to stitch, and try to find a method by which I could always have the required ligatures and material for such work at hand, and a method for doing those operations that was simple, rapid and secure.

Based upon an investigation of the numerous devices heretofore used, I conceived the idea that gelatin could be adapted to this purpose. I have it moulded in size and form required for the different operations, made aseptic, of proper thickness, and hard enough to retain its shape from fifteen to thirty minutes anywhere within the internal organs, after which it harmlessly absorbs. (Fig. I.)

When the gelatin support is placed in position, I insert a few interrupted sutures through all the coats of the bowel, to hold the parts in coaptation. (Fig. 2.) I then complete the work by using a suture that I have never yet seen recommended.

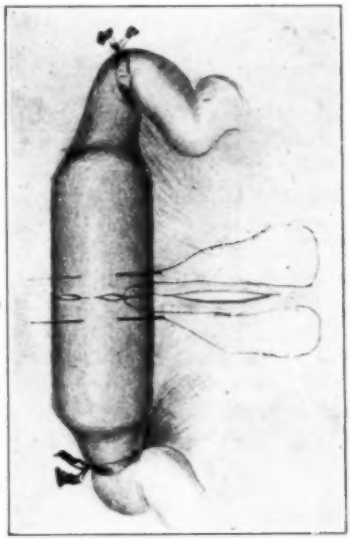

FIG. 2.—Interruped sutures through bowel, over capsule *in situ*.

I use a fine intestinal silk twenty-four inches long, doubled, with a needle on each end, having the knot where the silk is tied, in the center. I start my first suture under the mesentary attachment, inserting a needle with each hand, at the same time through the two outside coats of the bowel an eighth of an inch form the cut margins, pick up a

*Read before the Nebraska State Medical Association Omaha, Neb. May 3 to 5, 1904.

loop about one-twelfth of an inch in length, according to the method of Lambert, draw the parts together and tie them at each stitch, continuing thus until I have completely encircled the bowel. (Fig. 3.) I

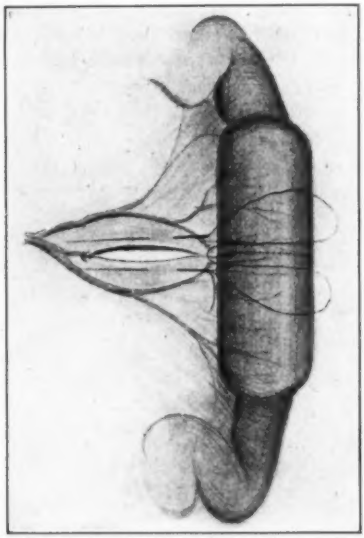

FIG. 3.—Bowel encircled with sutures and mesentry closed with same suture.

then close the mesentery opening with the same suture, being careful to pass my needles under the small vessels in the peritoneal coat, so as not to constrict the blood supply more than necessary, and when finished, I have found by forcing water into the bowel, it gave way first at a place other than where stitched. I then began to experiment on dogs, and found that I could relieve one of a part of his intestines in a very few minutes, with little harm to the dog.

My attention was next called to gastro-enterostomies. For this, I have a small flange moulded on one end of the gelatin cylinder, to hold it securely in the bowel where opened. After taking an interrupted suture on either side of the openings in the bowel and stomach, (Fif. 4), I introduce my gelatin cylinder, tie the parts together with the sutures thus introduced, thereby attaching the bowel to the stomach, then using my suture, with a needle on each end, I finish the anastamosis, by completely encircling the cylinder. (Fig. 5.) This secures practically the same result obtained by the Murphy button, can be done as quickly as a button can be introduced, and when complete, I believe it a much safer operation, as one need not fear the trouble that is so often caused by the button.

For my ureteral work, I have a small cylinder of gelatin, with an opening through the center, oval at each end. The cut ureter is caught with two stitches, passed through each end on opposite sides. These are used to assist in drawing the ureter over the gelatin cylinder, and when both ends of the ureter are drawn over the cylinder, they are tied to hold them in place. (Fig. 6.) I then start my two needles, as before described, except the needles for this work are smaller, and complete my anastamosis. (Fig. 7.) The object in having the small opening through the cylinder is to allow the urine to pass through, so there will be no stoppage in the canal before the gelatin absorbs.

By these methods a gastro-enterostomy, ureteral or intestinal anastamosis can be performed with very little difficulty. I keep my capsules and ligatures in a separate box, always ready for immediate use, and when needed have no extra preparation to make before I can begin my work.

In conclusion, I will state, that by using this method, if properly carried out, one can accomplish the work in a shorter time, more securely, with less shock and a lower mortality, than by any method of which I know for an anastamosis of the internal organs.

N. B.—I will state for the benefit of those who wish the appliances for these various operations, they can be procured from J. Ellwood Lee Co., Conshohocken, Pa., who can furnish the gelatin cylinders, with ligatures, all threaded ready for use, and to whom I feel greatly indebted for their kindness in assisting me with their faithful efforts to procure the exact devices for my work.

Editor's Note—The five cuts referred to in the text and not printed, were to be supplied by T. Elwood, Lee Co., but have not been received.

The Illinois Medical Journal.

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FEBRUARY, 1905.

NEXT ANNUAL SESSION, ROCK ISLAND, MAY 16, 17, 18, 1905.

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PROPOSED TEACHING OF APPLIED SOCIAL SCIENCE IN THE UNIVERSITY OF ILLINOIS.

The passage of a state merit law by the Legislature of 1905 seems to be assured by the platforms of both great parties and by the personal pledge of the Governor. Of the full effect of such a law in stimulating the scientific spirit in the charitable and penal institutions it is too soon to prophesy. It is well to remind ourselves however that the law in itself will be but a beginning. It is as some one has said "merely a basic decency." It will signalize the public and official desire that the humanitarian work of the State shall be done in the finest way and it will furnish a method by which public servants of scientific ability and professional ardor may be secured and retained. It will not furnish those servants. It will make the opportunity for the introduction of those improvements in the care of the sick and helpless which are already seen in the best public institutions of the world. On the other hand the law is no automatic contrivance. It will not work itself. It creates nothing but opportunity. Indeed one of the best features of the new situation is that it will invite the co-operation of other activities, but especially of the medical profession. Immediately upon the passage of a merit law, a new career of public usefulness is thrown open to hundreds of young men and women, in the work of carrying on the

various kinds of public institutions. In return for the stability of the employment it will offer, the State may well demand a higher degree of ability and training than it can obtain under the present haphazard plan. Yet if it demands this training it must also furnish it, and for such training for State service we naturally turn to the State university.

Teaching in applied social science is as yet a novel field. Harvard University and Simmons College are jointly engaged in developing a school of sociology, the University of Chicago has begun an Institute of Social Science and Arts under the leadership of Graham Taylor, the New York Charity Organization Society has just received a quarter of a million dollars for its School of Philanthropy. All these are for the general training of students of humanitarian and social problems, many of whom are likely to seek employment in private or public philanthropic enterprises. In like manner why may we not demand at this auspicious time—when the whole State is aroused to the need of genuine scientific care for the public wards—that the State University shall undertake the training of students who shall fit themselves for service in public institutions especially, although by no means limiting students in such a department to this class. It is not necessary to work out in advance just what form such work should assume. The problem must be solved slowly and tentatively in close cooperation with the authorities of the various public institutions.

It has taken years to work out the system of trained nurses, so that today nursing is a dignified profession. The trained nurse is not a rival or insubordinate inferior to the physician as was once feared, but a self-sustained worker in a field marked out and supervised by the physician, a force which makes possible medical successes otherwise absolutely unattainable. If this be true in the case of those acutely ill with obvious bodily ailments, can it not be equally true in our hospitals for the insane and even in our penal institutions? The proportion of *recognized* insanity among prisoners is ten times that found in the average population. Every penologist, every intelligent prisoner deprecates or resents the typical prison guard who is selected for his weight and muscular strength, perhaps, but surely because of his political "pull." The whole prison question is one which needs sustained medical attention. It can not be solved by contractors and politicians, however honest.

The entire body of authoritative alienists today agree that it is the care of the patient in the wards which counts most. Even with the best and largest medical staff the doctor can see the patient but a few minutes daily. He can give directions but he can not carry them out. The attendance on the wards needs complete reorganization. No service would be too expensive which proportionately increased the number of recoveries. Dr. Peterson says each chronic case costs the state of New York $6,000. In Illinois the increment of chronic cases yearly added to the public burden is doubtless at least 300, entailing, an ultimate cost of $1,800,000 upon the public, according to Dr. Peterson's basis of calculation.

The lay public is beginning to understand all this and will gladly justify a more costly service if it can see a more intelligent service and a final result of more recoveries.

There is an irresistible pressure upon the state to assume the care of classes not yet recognized as state charges. The claims of the epileptics, of the tuberculous, of all insane are properly urged. The responsibility of the state for all children, whether de-

fective or dependent or delinquent, is being recognized. Any adequate care or supervision of all these classes and perhaps of others not yet considered, requires special knowledge. It must be done in the spirit of modern medical science. This spirit must demand trained intelligent service and hence the medical profession is interested not alone in a reorganization of the medical service of public institutions on modern lines, but in lifting up the employes of all classes to a higher level.

The time is ripe in Illinois to begin work in this direction, and where should it begin so naturally as in the University of Illinois —the center of public education in this State? While the German state universities do not afford any precisely similar instance, yet the close relation established between them and the public dispensaries, general hospitals and hospitals for the insane, and the strict training afforded medical students thereby, is closely analogous and is full of suggestions for the present purpose.

Friends of education and friends of the helpless inmates, whether those inmates be patients or prisoners, may well agree in earnestly hoping that the present legislature will appropriate a sum which will permit the University of Illinois to inaugurate practical applied teaching such as shall result in an efficient, trained service for the State institutions.

SMALLPOX DISAPPEARING IN MANILA.

According to the last reports on vital statistics of Manila, Phillipine Islands, plague cholera and smallpox are at last yielding to the intelligent efforts of the American officials. When the character of the inhabitants and the construction of the dwellings is taken into consideration this achievement is only a little less remarkable than the eradication of yellow fever from Cuba. The report is also noteworthy in that it upsets the old idea that smallpox is more prevalent in cold weather. The official report reads:

Fifty-four per cent of all deaths occurred in children under 1 year of age, the greatest mortality being caused, as in the preceding months, by infantile convulsions, the number of deaths from this cause being 367.

Quarantinable diseases.—Of quarantinable diseases, only 1 death was registered from bubonic plague, the victim being a native resident of the district of Tondo. There were 5 cases of smallpox, with 2 deaths.

Twenty-four thousand three hundred and ninety-one vaccinations and revaccinations were performed in the city.

One hundred and twenty-four thousand units of vaccine virus were shipped to the provinces.

The prophylactic measures which are being diligently carried on in the city, together with the close of the warm season, during which, according to observation, smallpox spreads more rapidly, justify the statement that this dreadful disease will soon disappear.

Those wishing to secure space for exhibit at the Rock Island meeting should apply at once to Dr. E. M. Sala, Rock Island, Ill., for blue prints.

PRELIMINARY REPORT OF MEDICO LEGAL COMMITTEE.

At a meeting of the Medico Legal Committee held in Springfield, January, 1905, it was decided to make certain recommendations to the next meeting of the State Society and as those recommendations involve raising the dues, the creation of a large committee and instructions to the delegation to the American Medical Association, it was decided that this proposed report should be brought to the attention of each county society.

This committee was appointed at the last

meeting of the State Society, but under the present constitution and by-laws it can not do the work that the society vaguely had in mind when the committee was created. They will propose the following changes in the constitution and by-laws to amend article ten of the constitution.

"To amend Article Ten of the constitution so that the line will read $2.50 per capita instead of $2.00 as at present."

"To amend Chapter Fourteen, Section One, by adding after the words 'Shall be as follows' the following, 'A Medical Legal Committee.' "

Also to amend Chapter Nine by adding Section Six to read as follows:

"Section Six—The Medical Legal Committee shall consist of three members from Cook county and one member from each county other than Cook in the state. Its members shall be chosen by the House of Delegates upon the recommendations of the County Medical Society, the term of service shall be three years; from this committee an Executive Committee of five shall be chosen. It shall be the duty of this Medico Legal Committee to carefully investigate suits or threatened suits against members of the State Society and in case the charges are ill founded or the damage asked is excessive, to lend the threatened member such council and aid as is within its power. One Dollar of each due paid shall be placed in a Medico Legal fund, which fund shall be managed by this committee subject to the approval of the House of Delegates.

The following plan seems to this committee feasible and advisable. The large committee will be a rather loose organization; each committeeman will virtually be the committee in his county. The concrete organization will be the executive committee—this sub committee will have charge of the funds, will collect a library, will employ all moneys and determine legal policy, counselling lawyers will be retained, arrangements will be made with trial lawyers in the different counties. In case a member is threatened with a suit he will report to his county member, that member will investigate, handle the case if he can, if not, place the facts gathered before the executive committee.

The committee furthermore will recommend that the delegates from Illinois to the American Medical Association be instructed to advocate that the American Medical Association establish a Medico Legal department along the same lines, the states being the units instead of the counties, as in the plan proposed by Illinois.

(Signed) W. A. Evans.
H. N. Moyer,
G. N. Kreider,
E. J. Brown.

H. C. Mitchell was not in attendance.

THE BEST MAN FOR THE PLACE.

A journal styled The Chicago Clinic and Pure Water Journal, whose publication office has recently been moved from Chicago to Springfield, "where better mechanical facilities are procurable, and where more economical management is possible," and where we are told needed financial aid is obtainable, has some strictures on the management of the Illinois Medical Journal. In a general way it is asserted that a small number of physicians are endeavoring to use the State Journal for personal ends and to the detriment of a particular office holder, who for the past eight years has administered the leading medical office of the State with such satisfaction to himself that if he were displaced he feels that it would be a professional calamity. That this is a fair statement of the frothy January issue there is little doubt, as we are very confident that if this journal supported the aspirations of this particular office holder, Pure Water would echo our praises and we would represent, not a "coterie," but the organized profession. We shall not answer the inuendoes and personalities reflected in Pure Water. For example, we are charged with having lost the confidence of the medical profession of Cook County. though what earthly bearing this can have upon the question of office holding we fail to see. Such idle charges are only ejected like the inky fluid of the squid to ob-

secure the important issue. It is believed that the State of Illinois is now entering upon a constructive period in legislation and administration, and that the present executive will try to put the State charitable institutions upon a sound civil service. Much sanitary work also needs to be done, and it is most important that the chief medical adviser of the administration should be a man able, reputable, fearless and honest. This journal has and will continue to urge the appointment of such a man. It cares not where he comes from or who his friends are. The good of the profession and the people of the State will alone be considered.

In taking such a stand, it is possible that the Pure Water Journal sees one of those "mild but significant utterances" which are interpreted as meaning opposition to a particular office holder. *Veritas odium parit.*

THE STATE BOARD OF HEALTH.

The annual meeting of the State Board of Health was held on the last day of January, when the officers were reëlected. This must not be understood as meaning that the gentlemen composing the Board have been reappointed. Notwithstanding the strenuous efforts being made to make it appear that reappointments have been made, we are reliably informed that the Board for the present simply remains *in statu quo.*

Correspondence.

THE ILLINOIS TUBERCULOSIS TENT COLONY.

Galesburg, Illinois, Jan. 5, 1905.

To the Editor of the Journal:

The efficacy of the Illinois climate in the treatment of pulmonary tuberculosis, is now receiving most satisfactory demonstrations at Ottawa, LaSalle County. It is confidently believed by those who have been watching the course of events there, that, as far as the climatic effects are concerned, sufferers from tuberculosis will improve even more rapidly here than in the most favored climate in the west. A no small part of the favorable results obtained is undoubtedly due to two additional factors which are rarely found by those seeking relief from tuberculosis where climate is the principle thing sought. I refer to an abundance of food, deliciously prepared, and the comforts of the home, both of which obtain in large measure at the Ottawa Tent Colony.

I am sure that physicians who have had any considerable number of these cases to advise as to the climate most favorable for the sufferer to live in, have in many cases been disappointed in the results of climatic treatment alone. The reason for this is as above—the lack of proper food and a good place to rest. In other words, climate is but one factor in the successful management of pulmonary tuberculosis. The misery, one may say the cruelty, that the medical profession has been directly responsible for in sending these patients away from home comforts to merely exist in boarding houses, is a chapter that can never be completely told. How many patients have been thus banished only to return in a few weeks in a much worse condition than when they started?

I am not referring to the hopeless cases; but to those still amenable to the methods we now know to be necessary in order to get the best results. The difficulty in these cases was that referred to above; they found climate, but they needed something infinitely more; and that was an abundance of the very best food and a place to rest where strength was to be the chief end in view.

Last winter while in Denver, I saw many sights which go to show the truth of the above statements. One of them was a man, evidently a "one lunger," who was sitting on the slanting, narrow roof of his boarding house, surrounded by the redolent odors of fried cakes and potatoes swimming in ham gravy. He was getting climate, to be sure, but with it were such surroundings as to bring about a disgust for food, and finally a drifting into a mental and physical state which is but the beginning of a toboggan slide toward the grave.

There is, in this connection, another ques-

tion not often referred to, but which we may well begin to ask, namely: How long the states, in which these cases usually congregate, are going to stand for the great burden of caring for the tubercular poor who come in from other states? This phase of the matter has been discussed by the legislative bodies of several western states, because the expense of caring for this class is already entailing burdens that are being felt.

So I repeat, Mr. Editor, that the demonstration being made by Dr. Pettit with his Tent Colony, situated advantageously as it is, on the bluffs overlooking the Illinois River, is of incalculable value; first, in showing that cures can be made in the climate of Illinois, and second, that the climate is but a part of the requirements for the successful management of these cases. Home comforts and an abundance of scientifically prepared food, are equally important. It seems certain that these three (food, climate and the comforts of a well regulated home) will in the future prove to be the tripod on which the successful treatment of tuberculosis is to be built. The Illinois State Medical Society is fortunate; first, in initiating by resolution at Bloomington, May, 1904, this important work, and second, in having given the carrying out of the provisions of this resolution to Pettit of Ottawa.

It is also gratifying to know that this work, commenced by our State Medical Society, has been so ably seconded by the present State Board of Health.

My letter is already so long that I may not ask for further space in this issue; but if it is possible, will you insert the inclosed copy of a letter recently sent out by Dr. Mix and myself, as members of the Committee on Tuberculosis of the Illinois State Medical Society.

Very truly yours,

J. F. Percy.

THE TENT COLONY.

Galesburg, Ill., December 15, 1904.

Dear doctor:

We are taking the liberty of addressing you personally in order to obtain your interest and co-operation in maintaining the Ottawa Tent Colony at its present high state of efficiency.

This venture was inaugurated to demonstrate that the climate of Illinois is one in which the open air treatment of pulmonary tuberculosis can be carried on as successfully as anywhere in the country. That this has been shown in the most marked way is the testimony of all who have investigated this institution. Indeed, few similar colonies can show the results obtained at Ottawa because few have had, or are having, the intelligent supervision of patients which obtains there. But winter is coming on and especially the holidays, during which patients want to be at home and among their friends. This threatens to seriously embarrass the financial end of this institution, which is not being run for profit and which to date has not quite paid expenses.

There are thousands of suitable cases in this state to whom this institution would come as a God-send, if they could but know of its successful work. This, then, is the real purpose of this letter: to urge that you send at once every case that has not passed the first or second stages of this disease, to Ottawa. First, for the good of the patient; and, second, as a continued example for good in demonstrating that Illinois has a tent colony where patients have a greater prospect for a cure than anywhere else on earth.

Sincerely,

Charles Louis. Mix,
J. F. Percy,
Members of the Committee on Tuberculosis, Illinois State Medical Society.

DELINQUENT LISTS.

Galesburg, Ill., Jan. 16, 1905.

Dear Editor:—Knox County Medical Society is considering the adoption of some form of a delinquent list which will be practical and at the same time not involve the society nor the individual member in the meshes of the law.

We have ascertained that many of the ordinary methods are faulty from this point of view. For instance a man is reported as delinquent who can prove that he pays some of his accounts. In some states he can now proceed by law and collect damages not only against the one who made the report but against any member who is a party to the plan.

I will be pleased to hear from anyone who has had any experience with delinquent lists. How simple, how effective, how valuable have they been and what have been their disadvantages? Have they any legal flaws?

Very fraternally yours,

G. S. Bower,
Sec'y. Knox County Medical Society.

Directory of Chicago Societies.

District No. 1—North Side.
Boundaries: The river, the North Branch, the lake, Belmont Ave.
President, D. Lieberthal, 1750 Wrightwood avenue.
Secretary, R. H. Herbst, 517 Dearborn avenue.
Meets on the second Thursday of each month at 8:30 P. M., at Chicago Academy of Science building, Lincoln Park.

District No. 2—North Shore.
Boundaries: Belmont Ave., the river, the lake, the city limits.
President, G. W. Green, 2765 North Lincoln avenue.
Secretary, Geo. E. Baxter, 1916 Evanston avenue.
Meets on first Tuesday of each month at 8:30 P. M., at Ravenswood Club House.

District No. 3—Evanston.
Boundaries: City limits, Northwestern tracks, the lake, the county line.
President, P. D. Harding, Evanston, Ill.
Secretary, Dr. S. V. Balderston, Evanston, Ill.
Meets on third Thursday of each month at 8:30 P. M., at Woman's Club rooms, Y. M. C. A. building, Evanston, Ill.

District No. 4—Northwest.
Boundaries: Kinzie street, the river, the Northwestern railroad, West Fortieth street.
President, M. H. Luken, 79 Ewing place.
Secretary, E. E. Henderson, 171 Humboldt boulevard.
Meets on first Friday of each month at 9 P.M., at Northwestern University Settlement building, corner Noble and Augusta streets.

District No. 5—West Side.
Boundaries: The river, Kinzie street, Twelfth street, West Fortieth street.
President, J. A. Robinson, 297 Ashland boulevard.
Secretary, J. J. Alderson, 576 West Adams street.
Meets on third Thursday at 8:30 P. M., in Cook County Hospital, Wood and Harrison streets.

District No. 6—Aux Plaines.
Territory: The city west of West Fortieth street, and suburban towns on the C. & N. W. in Cook and DuPage counties.
President, A. J. Rosenberry, Oak Park, Ill.
Secretary, G. P. Head, Austin, Ill.
Meets fourth Tuesday; place announced each month.

District No. 7—Douglas Park.
Boundaries: The river, Twelfth street, the drainage canal, the county line. Includes suburban towns on the C. B. & Q., R. R.
President
Secretary, C. D. Pence, 859 Turner avenue.
Meets first Monday of each month at Gads Hill Settlement, Robey and Twenty-second streets.

District No. 8—Stockyards.
Boundaries: The river and drainage canal, State street, Western avenue, Fifty-fifth street.
President, T. C. Gary, 2184 Archer avenue.
Secretary, R. J. Tivnen, 100 State street.
Meets on second Thursday of each month; meeting place to be announced.

District No. 9—Southwestern.
Boundaries: State street, Fifty-fifth street, C R. I. & P. tracks, county line. Includes suburban towns on C. R. I. & P. R. R.
President, F. L. Rose, 5420 South Halsted street.
Secretary, C. H. Lovewell, Fifty-fifth and Halsted streets.
Meets on first Tuesday of each month at 9 P. M., at Grace Cafe, 540 West Sixty-third street.

District No. 10—South Side.
Boundaries: The river, State street, the lake, Sixty-seventh street.
President, J. L. Miller, 159 East Forty-seventh street.
Secretary, W. S. Harpole, 4827 Madison avenue.
Meets on———Thursday of each month at Vendome Hotel, Sixty-third street and Monroe avenue, at 9 P. M.

District No. 11—South Chicago.
Boundaries: Sixty-seventh street, C. R. I. & P. tracks, the Lake county line.
President, A. W. McLaughlin, 9139 Commercial avenue.
Secretary, J. S. Davis, 9139 Commercial avenue.
Meets in Dr. Harvey's office, Ninety-second street and Commercial avenue.

The meeting of December 14th of the Chicago Medical Society was taken up with a symposium on pneumonia, and papers were read as follows:

1. **"The Proposed Work of the New York Pneumonia Commission,"** by Dr. Frank Billings.

2. **"Etiology and Epidemiology,"** by Dr. Edward F. Wells.

3. **"Modes of Onset, Typical and Atypical,"** by Dr. C. S. Williamson. (See page 145, this issue of the Journal.)

4. **"Physical Basis of the Diagnosis,"** by Dr. R. H. Babcock. (See page 149, this issue of the Journal.)

5. **"Cardiac and Renal Changes,"** by Dr. A. R. Elliott. (See page 141, this issue of the Journal.)

At the meeting of December 21st, the symposium on pneumonia was continued, and papers were read as follows:

1. **"Blood Findings in Pneumonia,"** by Dr. E. C. Rosenow.

2. **"Pneumococcus Infections Othen Than Pneumonia,"** by Dr. R. B. Preble.

3. **"Pneumonia Due to Other Organisms Than the Pneumococcus,"** by Dr. James B. Herrick.

4. **"Diagnosis of Pneumonia in Childhood,"** by Dr. F. S. Churchill.

5. **"Treatment of Pneumonia,"** by Dr. Frank S. Johnson.

The general discussion on this symposium

was postponed until the meeting of December 28th.

Dr. Edward C. Rosenow read a paper on the **Blood Findings in Pneumonia,** of which the following is an abstract:

Bacteriology of the Blood.

In 175 cases examined, the Pneumococcus was isolated in 91%. Positive results were obtained as early as twelve hours after the initial chill and as long as 48 hours after the crisis. Cultures after the crisis, however, usually proved negative. A negative result indicates nothing except probably that something is wrong in the technic. In no instance could I demonstrate pneumococci in leucocytes. In the Atypical pneumonias and vague infections where the diagnosis is otherwise difficult or impossible, blood cultures are of the greatest value. By the aid of Blood cultures we are finding that the pneumococcus is found in the blood before any physical findings are present. Cases have been observed by Preble and others in which no physical signs of consolidation of the lungs were demonstrable yet running a typical course of pneumonia. The view that pneumonia means the secondary localization of a primary blood invasion and not a local disease, seems to be gaining ground.

Cellular Changes.

Bockman has determined that in pneumonia, as in other acute infections, the number of Erythrocytes are inversely proportionate to the degree of temperature. There is scarcely any infection in which the production of anaemia is as rapid as in pneumonia. Other things being equal, a high leucocytosis is a favorable sign. Cases with excessively high leucocytosis are apparently more prone to development of empyema and other complications.

The Agglutinating and Acid Producing Phenomena by the Growth of Pneumococci in Pneumonic Serum.

Does the pneumococcus, by its growth in the consolidated lung and in the blood of the patient intra-vitam produce acids as it does in the test tube, and if so, may not some of the symptoms of pneumonia be due to an acid intoxication?

In support of this view we now have the following evidence:

1. It has been shown in this investigation for the first time that the pneumococcus when grown in pneumonic serum produces a marked acid reaction.

2. A careful study of the literature seems to justify the statement that late in pneumonia after the powers of resistance fail, and after death, investigators have uniformly found a diminished alkalinity of the blood.

3. Smith and others "find a uniformly acid reaction of the lung tissue in cases dying from pneumonia."

4. Through the kindness of Dr. Billings I am able to report the following important observation. In the treatment of seven cases of pneumonia by the administration of large doses of alkalies, it was noted that the urine became strongly alkaline in reaction, and remained so until the time of crisis, a result of this medication. However, at this time when the products of resolution are being rapidly absorbed, the urine becomes acid in reaction for a period of time varying from 24 hours to 48 hours in four cases. In three cases, the urine subsequently became alkaline. These facts verify as nearly as possible in the human body a test tube experiment. To deny that pneumonia is partly an acid intoxication in the light of these findings seems to me to be hypercritical. Granting that pneumonia in part at least is an acid intoxication, would not the administration of alkalies in large doses be indicated in the treatment of this intensely fatal disease? In fact it would seem that this is a rational explanation of the good results claimed by some investigators from the continuous administration of some alkali water, etc., in the treatment of pneumonia.

PHYSICIANS' CLUB OF CHICAGO.

The regular meeting of the club was held at the Sherman House, Tuesday evening, December 6, 1904. Chairman of meeting, Dr. E. J. Doering.

Subject: **The Place in Medical Education of the Evening Medical School.**

Speakers: Dr. L. Blake Baldwin, President Dearborn Medical College; Dr. Frank Billings, Dean Rush Medical College; Dr. H. M. Martin, President Jenner Medical College; Dr. Weller Van Hook, Professor of Surgery, Northwestern University Medical School; Dr. Frances Dickinson, Dean Harvey Medical College; Dr. D. A. K. Steele, Professor of Surgery, University of Illinois; Dr. George W. Webster, President Illinois State Board of Health.

Dr. E. J. Doering, Chairman, called the meeting to order and said:

I am surprised to have been asked to preside at this meeting but understand that they have been looking all week for a man who was not connected with schools to preside and not being able to do so asked me.

The question is "whether men or women should study by day or by night."

I have known of men and women seeking an education who were willing to do anything to be educated and do know of people who have worked all day and have gone to school at night willing to do everything with that end in view, and persisted in all they did with that in view.

I will now call Dr. L. Blake Baldwin; President of the Dearborn Medical College.

Dr. Baldwin: I deeply appreciate the honor conferred upon me this evening in being invited to address this honorable body of the representative medical men of Chicago on a subject in which I am deeply interested, the **place of the night school in Medical education** and to say a word in behalf of the men of high ambitions and aspirations who have created a demand for such an institution.

If only those who have the advantage of a

competency, might aspire to a higher professional or scientific education, it is self evident that there would be little use for the evening classes established by our public and high schools, for the evening extension courses, attended by our public and high school teachers, for the evening departments of our commercial and scientific schools. For that branch of one of our greatest universities recently established in the heart of our own city, for our evening law or medical colleges, founded for the express purpose of aiding in the elevation and enlightenment of those who, for financial reasons, are debarred from devoting their entire time to educational advancement, and who does not honor the man or woman who will override every obstacle to fit himself or herself for his chosen vocation.

These are the self made men with high ambitions and a purpose in life, who have distinguished themselves in national and financial affairs, standing shoulder to shoulder and many times outclassing their more fortunate neighbors in their battle through life. For the man who will undertake a professional education while at the same time supporting himself and oftentimes his parents or own family, has a grim determination and a purpose in view that knows no failure. These are the men who make up our evening classes in medicine. Men who sacrifice every social pleasure; every hour, to their duties and count the value of every minute, who are never without their books on the car, at their lunch, in the college study room and late into the night in the solitude of their own rooms. Gentlemen this is the manner of their lives and those of you who have seen, have been impressed with the absorbing attention paid to their teachers, tolerating no interruption, making note of every point.

That such men will succeed is beyond question, for it must be conceded that with a course of study of a recognized required length and an efficient teaching faculty, the mental capacity and personal effort of the student is the only remaining factor in determining the thoroughness of his education. That the evening medical colleges do provide the required term of instruction, it is only necessary to consult the time requirements of the Illinois State Board of Health to which they are responsible, not only for the term of instruction, but for preliminary educational qualifications, as well, and further to the recent "report on the curricula of American medical colleges" compiled by Dr. Geo. W. Webster and the recommendations thereon for a standard curriculum which is, to my own personal knowledge for the entire four years, less than 100 hours in excess of the time now being given by at least one of the evening medical colleges of Chicago. With this fact before us it is further argued that no time is left for study. But every student utilizing every minute of his time during the day and studying late at night, finds from four to eight hours to pore over his books, which you will all agree is as much time as that afforded to the day student, after being in school all day, even if he is not one of those, who utilizes his time out of class in seeing the odd sights of Chicago.

It has been argued again that a man cannot do two things at once, that he must slight either the one or the other, that he must either slight his employer or neglect his studies. If this were true, it would be hard to account for the responsible positions held by the night students in the many financial and commercial enterprises with which they are connected, where merit alone is the test of their positions: and who stops to question the ability of the man in the commercial world, who is a responsible and executive head of not only one but various enterprises. Were these men to neglect their employers in their positions of responsibility, which many of them hold, that of bank tellers accountants, auditors, heads of departments, etc., or even down to the most humble, menial position, their removal would be a question of short notice. Yet in canvassing the situation, I have not known of one single instance, in which a student of a night school has been removed from his commercial position from dereliction of duty to his employer.

It is not every man who undertakes the study of medicine at night who completes his education. The life during his period of education is strenuous to the highest degree: but those who do succeed in standing the test, have brought honor in their examinations before the State Board of Health and have stood fairly with the graduates of our day schools, and those who have chosen to take their last year's work in a day school, have practically without exception, graduated with credit and often with honor to themselves and the institution that issues their diploma.

In summing up the situation as revealed by the report of our Honorable President of the State Board of Health, referred to, there is lamentable lack of uniformity as to what is considered the proper term of a medical course. And it has been demonstrated that it is not only possible but practical, for a night school to devote the average number of hours to clinical and didactic class work, and this is now being done and whenever it is possible to adopt a uniform curricula, I can give you my absolute assurance that, at least one of the night schools of Chicago will be among the first to adopt this standard, even though it require a five or six year course to meet it.

Dr. Frank Billings, Dean of Rush Medical College was introduced and said that the place of the night school in medical education is a subject which must interest every physician. The discussion of it involves a discussion of the subject of medical education. It should be considered without prejudice and our expressions should be without rancor.

The status of medical science of today is very different from that of twenty or of fifteen —and yes, of even ten years ago. Twenty years ago medicine was taught chiefly by lectures and by clinics and but a moderate amount of work was done in the laboratory. Today laboratory instruction is the chief means of teaching the first two years of medicine and

it also enters largely into the instruction of the last two years. The fundamentals of medicine comprising physiology, chemistry, anatomy, pathology, including bacteriology, require a preliminary knowledge of physics and of general biology and the individual who would apply his knowledge of the fundamentals in the practice of medicine and surgery in a rational way must be thoroughly grounded in these fundamentals. If these fundamentals are properly taught, it requires a large and costly equipment with many teachers and as a result the cost of instruction is now very great and amounts to—from the estimates made by good teachers in many schools—from $450 to $500 a year per pupil. The proper instruction in the clinical branches requires a control of clinical material which involves an expense that means a cost of not much less for the clinical years than that of the first two.

If a student is properly taught so that as a practitioner of medicine he may not only be a rational practitioner and not merely a peddler of pills, but a constructive investigator, his education will cost much more than he will pay in tuition. Consequently there is no profit financially to the medical school in educating students of medicine.

This country is already over-crowded with colleges and far more students are turned out each year than can find places in which they can practice medicine with the prospect of gaining even a living.

The question therefore of the place of the night school in medical education involves first the question: Is it needed?

I think one may answer that it is not and when one answers that it may be also said that there is no place for many of the day schools which now exist.

Can the night school properly educate its students?

The answer to this involves first the answer to the question as to whether an individual can follow an occupation during the day by which he may gain a living and pursue in the evening a course of study which will be of profit to him.

I think one may say that the study of medicine is so important and is so profound that to master it in the time usually devoted to it will require the undivided attention and full strength of the student. When tired after a full day's work, the student is not likely to be in a condition to give his best attention to the work before him.

That poverty or the necessity for earning a livelihood is an excuse for an individual to study medicine at night is, it seems to me, not well taken for if an individual have the right stuff in him he will be able to secure enough money by some means which will enable him to devote his whole time in a day school with opportunities of study at night even though it may take a larger period of time to gain that end than by attempting to do two things at one time, one of which at least must be superficially done.

In the past many of us had to earn our way in college and the difficulty of securing money to enable one to give one's whole time to medicine was not very different twenty years ago than at the present time.

One often hears the remark that the men of today who have become eminent received an education twenty or more years ago which was very superficial in the fundamentals as compared with the necessary knowledge of those branches today. This is unquestionably true but as a rule those men have had to get their fundamentals chiefly by post-graduate work which required usually a visit to foreign countries and an expenditure of a great deal of money and of time which meant still more money. Even now such men are limited in the sense that they add to the sum of clinical knowledge rather than to be constructive workers. I do not believe therefore there is a good reason for the existence of the night school. I cannot understand how they can secure the equipment or the clinical material with which to meet the demand of today nor can I understand how they can expect to teach students whose time is chiefly given up to some other occupation well enough to make good practitioners of them. I believe that the men and women who are engaged as teachers in the night schools are as a body honest and conscientious in their work and that they feel they are doing a good work. But nevertheless I am opposed to the night school.

The chairman introduced Dr. H. M. Martin, president of Jenner Medical College.

Mr. Chairman, Ladies and Gentlemen of the Physicians' Club: I have but a few words to say. I am not here to defend the evening medical schools, that is not necessary. Its place in medical education is the same as the day school. Any man or woman of sound mind and good judgment with the requisite literary education has a constitutional right to study medicine when and where they please, it matters not whether it be in the sunlight or the sunlight or the sunset college. The requisites to obtain this education in either are the same, a qualified faculty to teach and qualified application of students, backed with ample equipments and the necessary materials. I shall not tire you with as explanation of what is necessary to have and to do in order to teach medicine. I know the majority of those present and am fully aware that they know of all the requirements as set forth by Dr. Billings, who endeavors to show that a school must be endowed in order to give the proper and efficient course. Not at all; if our teachers are endowed with human feeling toward the earnest, but poor student and desire to give their services for less than those who teach in day schools, that is entirely their business. Again if a man or woman desires to study medicine at night and work, perhaps much harder than the day student, that too is their business.

I know of a young man, who by his day efforts supported a widowed mother and crippled sister and worked himself through high school by night work, his father having recently died and now he faces the necessity of day work

for his ambition is to go to the night school of medicine. Such men have the right "go" within themselves to make the very best of anything they undertake. This is only one instance. Nine-tenths of the students who study nights do so under similar conditions. Shall such men be denied their ambition, most assuredly not.

It has been said here tonight that they can only hope to attain to socalled "business men doctors." I contend that this is the first thing that all of our socalled "big doctors" have done in establishing themselves. No doctor succeeds as he should without he associates with his medical education the greatest possible business judgment and tact with diplomacy. You all know of many thoroughly qualified physicians in any cases much better than they who are so called "successful" (in medicine) yet they cannot earn enough to keep "body and soul together." They may even have to solicit the "big doctors" to send them "nursing cases." And all this too for the lack of business tact, judgment and some diplomacy. And finally are our own lawyers being educated by inferior means simply because three-fourths of the Chicago law schools are night ones.

It cannot hardly be possible that the so-called day school; might be likened to my dear, Sunday preacher, in righteous indignation, in speaking of other creeds said "Oh, Lord forgive them for they know not what they do." Of course his was a special religion.

No medical education is as thorough as it should be until the student has fully demonstrated his knowledge in a satisfactory manner at the bedside and in the operating room and yet nine-tenths of medical students are graduated as proficient in medicine and surgery without any such training. This is not ideal medical education.

Dr. Weller Van Hook, of the Northwestern University Medical Faculty, said that the idea of Medical Education in Chicago is one that needs careful study. The ideas are higher than ever before, as Dr. Billings has shown. Laboratories and expensive facilities are required to teach as we do now. More time is required of the student than ever before.

The facts of medical science have multiplied to a wonderful degree. No individual can carry in mind all the facts. He must have gradually absorbed the principals and know where to look for his facts. Facts must be first taught and principals must be carried away. Facts can be learned quickly but principals must be slowly allowed to sink in and become part of the individual.

A medical friend of mine told me with great glee how his little boy of five could name all the bones of the human body.

The cultural side of medical education must not be lost sight of. Medical culture cannot be obtained in a day. Stuffing of facts may be a rapid process. They must be classified and put in order. Too little thought is given to culture in medical education. We are all inspired by the views of Osler.

We must consider the influence of the medical man on the progress of science. Literary medical culture is more than medical science.

The results of the night schools will be determined by time. It is yet too early to judge.

Dr. D. A. K. Steele, Professor of Surgery, University of Illinois, said that it was now his turn to roast the night medical schools, but he knew what the night medical schools are doing. He formerly labored under the delusion that they were kindergardens. He found, however, that youth was the instructor and the adults were the pupils. The kindergarden was reversed.

He thought the equipment would not compare with that of the day medical schools. He was surprised to find that it excelled in the school he visited that of his own school. He came away and set to hustling for a better equipment.

The night schools have an important place. Its plan compares with that of the university extension courses. Those who wish to study medicine should have the same right to study evenings or any time as those who wish to study other branches of science.

He formerly opposed the night schools but has been converted. He knew of some others who have been converted, among them Prof. Quine. There are two sides to the question. He is in favor of them and believes that they fill a place in medical education.

Dr. Geo. W. Webster, President of the Illinois State Board of Health said that the place of the night schools in medical education seems to be not of theory but of fact. Therefore let us consider some of the facts which ought to throw some light on this subject.

There are 202 law schools in the United States 25 are evening schools. In the Y. M. C. A. throughout the country 32021 persons are taking the evening supplemental education to broaden their knowledge. In the city of Chicago alone about 1600 are taking supplemental evening instructions.

Average earnings of medical students are $10.00 to $15.00 per year. There are 157 medical colleges in the United States. He had no figures covering all of these but a student's committee has existed in Columbia for 10 years which seeks employment for those students who desire to earn money. This committee obtained employment for a large number of men during the year. The total earnings were considerable.

A certain time during the day or night must have necessarily been devoted to the work necessary to earn this money. The students who earned this could not have devoted their whole time to the study of medicine.

About ten years ago when the State Board of Health was called upon to give its recognition for the first night school in Illinois, it established an arbitrary standard of requirements

which the night schools were able to cover. At that time four years of study were required of six months each, running through 4 calendar years—nothing was said as to whether this should mean 1 hour per day or 1 hour per month. Since then it has established the rule that there must be five hours a day as the minimum amount of time to be devoted to class room work. By this standard the night school, giving instructions three hours an evening, should have a course lasting 6 years. One giving 4 hours an evening 5 years. If they cannot come to the standard they must go out of existence. If they do come up to the standard there is a place for them, it surely can make no difference whether a medical student earns his living during the day and gets his medical education at night or vice versa.

The subject was then thrown open for general discussion.

Dr. J. A. Egan: I came here tonight to listen rather than to talk. I desired to hear the views of not only the physicians on the program, but of others who might be present. My opinions, furthermore, might not interest you greatly. They would undoubtedly be considered somewhat **ex parte,** in view of the fact that the State Board of Health during the past year has recognized an evening school. As the chairman has called upon me to speak, however, I will take the liberty to wander a little, and briefly discuss a subject which is probably of as great interest as that under discussion, namely, the place in medicine of the day school, or rather, of some day schools. When this subject occurred to me I had in mind certain documents on file in the office of the State Board of Health which throw considerable light on the manner in which certain schools have been conducted of late. I will not go deeply into this subject tonight, but will simply call to memory for your edification one of the examination papers, which was presented to the State Board of Health not very long ago. The candidate is a graduate of a leading college of a regular school located not a thousand miles from Mason & Dixon's line. He graduated, not in 1884 when the repetitional course was in vogue, when "the preliminaries" were somewhat neglected, when little or no evidence of preliminary education on the part of the applicant was actually required by many institutions, but in 1904 when the majority of medical institutions, including that under discussion, demanded that each matriculate should present evidence of attendance on a high school course or its equivalent: when the standard of medical education was being steadily advanced, when the majority of medical colleges required an attendance on four full courses of graded lectures. This candidate appeared before the State Board of Health for examination. He failed to pass the examination for reasons which will later become apparent to you. I will call to memory some of the answers made by this candidate to simple questions propounded by the Board.

He was asked to give the dose, method of administration, and the therapeutic indications of morphine sulphate. He advised the Board that "morphine is a Hypnotic, dose usuly 1¼" and that "it might be given internally or hypodermacitly."

A similar request in relation to tincture digitalis brought out the following information: "Tr. digitallis is a hart tonic dose about 40-60 m. it is indicated in weak hart or in mummurs in acute parinchimitis nephritis."

Phosphorous, according to this aspirant for medical honors in Illinois, "is a tonic. dose gr. 30-50."

Strychnine was considered "a hart tonic, dose 30-60," but whether ounces or grains the Board was not advised. Strychnine is indicated in "a weak hart as failure during an antesitic."

The candidate played his trump card in connection with tincture belladonna. Asked to give the dose, method of administration, and therapeutic indications of this drug, he answered as follows: "Tr. belladonna is a slight purgative dose 30-60 m. it is administered by the mouth it is indicated in chronic constipation to dilate pupil."

The examiner made the following terse endorsement across this candidate's papers: "This man would have killed at least ten patients with these doses."

Gentlemen, this is not an isolated case. The records of the Illinois State Board of Health and of those of many other examining boards can show many similar. Neither is this the first time that this particular medical institution has presented to the Illinois State Board of Health a demonstration of the inadequacy of its teachings and examinations. What is the place in medicine of a day school that graduates a student who gives answers such as these, who, if permitted to practice would scatter death and destruction wherever he went, murdering not only innocent patients but the English language also?

There may be valid objections to the evening school. Obviously the course given in any evening school cannot come up to the standard of the day schools represented here tonight. It is useless to gainsay this. It is the opinion of the State Board of Health, however, that there is a place in medical education for a properly equipped, well conducted evening school, else the State Board of Health would not have conferred recognition on any evening school.

We should carefully scrutinize the evening school and, if it fails to maintain proper standards, unequivocally condemn it, but before passing judgment upon the evening school, we should not fail to also carefully scrutinize some of the day schools.

Dr. Baldwin: I want to tell you that it is a serious business running a night school. I am trying to make mine the very best night school in Chicago, the other night schools are trying to beat me and they are making me hustle.

I requested the Secretary to ask every one on the programme to visit my school, so that

each might speak from personal knowledge. They might modify their theories, after seeing what we do in practice.

The teaching faculty in my school is all good. I run the school (Laughter) there is no friction, no turmoil, nobody comes with a frown on their face; wouldn't do anybody any good if they did, they all just work hard. I would like to have any of you come down and inspect my school; I think it will change any narrow ideas that anyone may have who criticize without knowing.

A good many doctors are taking a course down there, it does not cost them anything; they are getting some of the foundation which they missed.

Dr. Julius Grinker: I would choke off all night medical schools. How can one obtain a proper education in these houses at night when the body is tired from working all day? Is there a demand for night schools? Of course there is, an artificial demand, stimulated by copius advertising. Did not the first night school in Chicago send out circulars broadcast, saying to all, "Why drudge all your life, when you can be a doctor for one hundred dollars a year?" I know Dr. Dickenson promised graduation to students. I had brought to me for signature the diplomas of men I never had seen and of whose qualifications I knew nothing. Neither I nor the teacher of another important branch signed those diplomas, and yet those men were graduated. They were even given a license to practice from the State Board of Health. When I protested before that body, the then Secretary, Dr. Scott, assured me that he knew these men. This was before the diplomas were presented to him. I do not know what influences were brought to bear upon him.

What sort of doctors are these which the night schools are making? Imagine the barber who shaves you for a number of years one day saying, "Congratulate me, I am a colleague of yours. I have just graduated from Harvey." A sausage vender took the course, but did not make a success as a peddler of pils, and so continued, as before, to be a seller of sausage.

The gentlemen who speak of the constitutional right we have to get an education at any time during the twenty-four hours forgets that the public also has rights that must be respected. Is it right and proper to juggle with the good nature of our unsuspecting neighbors and compel them to accept a mere substitute and an adulteration? We prosecute the substituting pharmacist, but we tolerate and protect in our own ranks the manufacturer of an inferior grade of doctor. Nobody can tell me that a man can go into a medical school and make good use of the course without preliminary training, and without devoting his days and nights to the study of the difficult problems confronting the practitioner of medicine.

The subject of medical education is one of the most serious problems that confronts our profession to-day. Not undeservedly are we Americans looked upon as mere pretenders when we attempt to practice in foreign countries. And is it not the diploma-mill and the night medical school, both products indigenous to free America, that are largely responsible for this.

Dr. Stuart Johnston: It is not only the laboring classes who attend the night medical schools, many of the students are employed during the day as teachers. I went into night school work from motives not entirely philanthropic and altimistic, but I learned to think well of the night school pupils. I first came to a knowledge of them, then admiration and their affection.

Dr. Billings finished using arguments for my side. Who doubts that he and Dr. Senn, if night schools had been in existence in their time, would have availed themselves of them.

University extension lectures and the night schools are the great things of this city. They strive towards the ideal. We can never obtain ideal medical education any more than any other ideal, but we must ever strive towards its attainment.

The higher education is not an absolute requisite for success. I recall that a rail-splitter was a president of the United States. Dr. Billings laments his failure on account of lack of fundamental science. We all admire that failure.

Dr. Jos. Zeisler threw some side lights upon the subject. Many teachers accept positions in the night school, expecting the students, mostly residents of the city, to send them work. Students at these schools have been known to be so fatigued during lectures, that they actually fell asleep. The leader of one of the night schools admitted that his intention was to eventually transform his institution into a day school. The students of these schools will rarely after their graduation be willing to devote one or more years to hospital work or study abroad. They will become good business men in the profession, but will add little to scientific advancement. A comparison with evening law schools is not just; the students at these devote their day to work in a law office. The night school tends to cheapen medical education and to create a class of doctors who instead of elevating, must inevitably lower the plane of the profession.

The Chairman: Dr. Baldwin says there is present with us tonight a graduate of a night school who we will all doubtless be glad to hear.

Dr. Gotsche: I am a product of a night school. I earned fairly good wages but wanted to better myself and long wished to benefit myself, not financially but socially. I had always wanted to study medicine as far back as I could remember. As far as the hours were concerned I found them short. I arose at 5 a. m.; after one or two hours spent in study I went to work at 8. During luncheon time I found time to

study. I finished duties in the store at 5:30 and after a light supper, I hastened to school.

I attended the clinics or studied my books between 6 and 7. I took notes which I studied on my way home. If not too tired I spent an hour or two in study when I returned home. Studied all day Sunday. It was truly a strenous life but I gained 25 lbs. I often went from the store tired out but found myself refreshed after an evening spent in the medical school.

Dr. J. A. Egan: The remarks made a few moments ago relative to the State Board of Health and the actions of the former Secretary, may have led some physicians present to infer that in the recognition of evening schools in 1896, certain strong influences were used, that the recognition was accorded hastily and without proper investigation. It would be well therefore if I were to set before you a statement of facts in the case. Much has been said during the past eight years relative to the action of the State Board of Health, in recognizing evening schools. I have received several communications on the subject, many not very complimentary in character. About a year ago my attention was called to a communication on this subject sent for publication to a leading medical journal. In this the Board was severely criticized and it was broadly hinted that recognition was secured only through great "influence and corruption." I replied at length to this communication (which by the way the editor saw fit not to publish) and furnished some information which had not been widely disseminated. I happen to have a copy of my letter wiht me tonight. With your permission I will read a few extracts. These read as follows:

"As stated, the board serving under the administration of Governor Altgeld, under the presidency of the honored dean of the College of Physicians and Surgeons, Chicago, Dr. Wm. E. Quine, recognized the Harvey and Jenner (Harvard) Medical Colleges. As you will see by the following brief statement of facts, the board carefully considered this matter, and recognition was acocrded only after mature deliberation. The 'great influence and corruption' which exist in the mind of the correspondent, seemed to be powerful slow in action.

"In order to save time and space, I will refer to the Harvey only.

"The Harvey Medical College was determined 'not deserving of approval' at the September, 1893, meeting. See page XL, 16th Report. I see nothing in the 1894 minutes concerning this institution. A report on the Harvey Medical College was submitted to the board at the January, 1895, meeting by the Committee on the Administration of the Medical Practice Act. Dr. Wm. E. Quine and John A. Vincent (see page XXIV, 18thReport). The committee recommended that further consideration be deferred for one year.

"The College asked for a further hearing at the April, 1895, meeting. This was granted. (See page XXXIII, 18th Report.) A further investigation was ordered. (See page XXXIV.)

"On pages XXXIX-XL, 18th Annual Report (June, 1895), you will find a further report of the Committee on the Administration on the Medical Practice Act. The Committee found that the college had improved and recognition was accorded for the year 1895-6 and thereafter.

"At this same meeting (See page XL), the Harvard (Jenner) Medical College was also recognized.

"The members of the board at this meeting were Drs. Wm. E. Quine (president), Oscar O. Baines, George Thilo and Sarah Hackett Stevenson,, all of Chicago, and Dr. Julius Kohl, John A. Vincent and B. M. Griffith, an association of men and women likely to be swayed by 'great influence and corruption.'

"You will see from the above that the consideration of the Harvey Medical College covered a period of nearly two years.

"I really must apologize to you for bringing up this matter to-night. The charges made are not worthy of notice, but did I fail to reply, my silence might possibly be misconstrued."

Dr. J. E. Stubbs, of the Faculty of Harvey Medical College, said that every diploma that was signed by them was investigated by him and he knew that the man was qualified in his branch at least. The faculty voted in each case before conferring the diploma. It is true, as Dr. Johnston has stated, that one of our greatest generals graduated no higher than the public schools.

A preliminary college education is desirable, no doubt, but very many men stand high in the profession and in the world at large that has never gone through college.

We need not go to the night schools to find students sleeping during lectures. He had seen them nodding and napping in the day schools; had even done the same himself.

His observations of night school pupils proved to him conclusively that all were there on business and that all worked hard. They worked by day at their vocations and studied by night, but they had no idle moment in the twenty-four hours. Men who thus acquired knowledge **ad astra per aspera.**

Dr. Humiston: As to the question of getting consultation business from teaching in the night schools, that applies as well to the day school as to the night school. To any student, the man teaching him is the best teacher possible.

When he requires advice afterward in his practice, it is natural that his mind should turn to his former teacher.

The night is as good a time to study in as the day. We most of us chose the night to be born in, you all travel by night to save a little time, trusting your precious bodies to an engineer and his crew, who are working at night.

Col. Fabian: I am a layman, but I am going to say a word or two about the night schools. When or where man acquires knowledge makes little difference, so that he acquires the knowledge.

I know something about the night schools in Chicago. I run a night school. I have 50 stu-

dents, between the ages of 14 and 17, who support themselves. That they must study at night is greatly to be deplored, but that they have the opportunity of studying at all is a matter for congratulation.

One speaker has said that the medical night schools produce only medical business men. I should like to ask you how many of you doctors are in the profession for your health. It would be a good thing if you would pay more attention to the business end.

My night school is not a charity; it takes in $400.00 per month. But I can tell you night schools don't pay dividends. There is not a night school in Chicago with money to send to Springfield for the purposes of bribery and corruption. I would like to say to Dr. Baldwin, anent the money which he is going to put into his night school, that he reminds me of a story. An old farmer had a bull who broke out of the pasture one day and rushed upon the railroad track. The locomotive headlight of the first express was coming rapidly up the track. The bull, with lowered head, stood steadfastly in its path. The farmer said to the bull, "I admire your grit, but consarn your judgment."

Dr. Frances Dickinson.

Mr. Chairman, Ladies and Gentlemen: The place in medical education of the evening medical school is that which it already occupies and that which it may yet attain. Medical education at night was a radical idea—radicals are roots—so the idea was buried in new soil and the planting took place at an unusual hour of the day. It was watched, anxiously and tenderly cared for. It lived, grew, bloomed and multiplied. When these results were publicly compared with the blossoms of medical education given at other hours of the day they were found to belong to the same general rank and equally high.

Our soil consisted of adult brains of men and women who left school eight to thirty years ago when between the ages of twelve and sixteen years, not all necessarily because of economic necessity. The largest percentage of our best men leave school between these ages. The adolescent stage of child life takes from the text book school life the vigorous boy and girl, who will not go to school any more and sit still all day long. This child demands a change of occupation and must use his hands and feet and all his forces to answer nature's own call for healthy growth of mind and body.

This vigorous, healthy fellow in after life finds that he wants an education best attained in colleges and universities. He wants it for better social position, business purposes or for his own pleasure. His general life and business training has been a schooling. It has developed his capacity for work and thought, trained his powers of concentration and observation and increased his resources for application, quickened his ability to apply and enlarged his sympathetic knowledge of his fellow men. Shall all these attainments go to naught when he knocks at the college door and asks for admission? No, the least we can do for this intelligent man, over twenty-one years of age with a record of more than five years in business, is to give him one year of the four years' course leading to the degree of A. B. or B. S. Help him to the opportunities to attain the equivalent of a high school diploma and college preparatory without much relation to the conventional time credit.

There are hundreds of these business men in our best families in all our large cities who will give back immediately to the community in which they live the benefits of up-to-date knowledge and who will thereby be grander and more forceful citizens.

The medical work undertaken at night does not fail to accomplish the medical training that Dr. Billings has so nicely described this evening as the proper medical education.

That the evening school has met in its short life with good results has been amply proven by the common public examinations to which the graduates of all schools have been alike subjected for the last five years. Harvey ranked second only to the North-Western in three out of five years, and never below the third in rank of the fourteen medical schools of Chicago before the Illinois State Board of Health.

Complaint has been made this evening that there are already too many physicians. It may be so, but not to the door of the evening medical schools can the complaint be laid. Harvey Medical College has given diplomas to only one hundred and fifty graduates in ten years, a number that each of the universities turns out every year. Who is filling the medical profession?

I have personally visited at least one-half of the medical colleges of the United States, particularly the universities in the East, West and North and several in foreign countries, and know that the equipment of our night school, for the number of students taught, excels in several departments, that found in any university in Chicago. In physiology, no university at home gives each individual student as many instruments to work with, as we do at Harvey. This laboratory equipment is necessary to the educational success of an evening school.

The description of medical education by the last speaker from the North-Western I fully agreed with. By the adoption of different methods of teaching than are used in the day schools, this best undergraduate training can be passed on at night. When the methods of imparting knowledge in the evening to adult minds shall be the same as used in the day schools to youths the night schools will be utter failures. Many day school boys are callow, soft and vealy youths, inexperienced and know no value of time and put no value to their parents' money. They must have extra side lights thrown on the subject being taught. The man and the woman student, who does not start until years after this little callow fellow has graduated to sign a death certificate at twenty-one unquestioned, does not need these side lights, he must have the pith of the mat-

ter thrown at him immediately and by teachers who are thoroughly conversant with their subject and in a way that involves not only the auditory and visual senses, but the tactile sense through his own fingers.

One hour lecture and two hours laboratory work and no man ever sleeps in his class and every one goes home more restful for the change of occupation, for doing in the course of the evening that which he wanted to do. When we live that way night and day our wrinkles go away. Night medical schools are wrinkle removers.

Each opposing speaker not only described an ideal medical education, but both reached the same conclusion, to-wit: that he did not see how this training could be accomplished at night. As alike are these opposition view so equally alike is the value of these views.

Experience as well as speculation are both necessary to attain the best judgment and reach the most trustworthy conclusions. These well-known speakers and forceful gentlemen have only speculation to offer you in opposition to the night school. Neither has had one particle of experience in night medical school work, and I doubt if either has ever entered an evening school of medicine. Their thought is the best as far as it goes, but without experience and personal knowledge necessary to the best of judgment their conclusions are only half the truth.

The last speaker thought that principles could not be grasped after the sun went down that only ideas could be pigeon-holed. When all of the principles of medicine are gathered together and presented in their most forceful manner it does not take many storage rooms of even pigon-hole size. The adult mind more readily sees the application of general principles. The business man has learned to meet people, he knows how to come in contact with people in a manner necessary to a successful physician, which is only learned by contact with people and never can be taught in universities, colleges or high schools.

The adult enters the evening school with this unattainable-in-college training already attained. This is very noticeable in the manner in which he approaches clinical patients, whether in the dispensary or at the bedside, and in his conduct during school hours.

The evening school has still further the advantage. In the arrangement of its schedule and methods of management, it is not bound down by any antiquated arrangements or distribution of faculties. It is free to adopt the latest and most approved methods in all departments and, therefore, should more quickly give evidences of its work being based on the most modern scientific methods.

It has been admitted here this evening that day school students work for their living, too. Who has the more energy for his work? The boy who is hustling around for a job, and may be begins work by four in the morning, or the older boy who is employed from day to day the year around and possibly has been in the same work for many years, to whom the evening work is a relief and a pleasure and "goes with the grain."

Modern scientific education has a claim upon every department of public and private life and as the first two years and the preparatory year of the present medical curriculum is up-to-date scientific thought there should be opportunities for people in all walks of life, public and private, to obtain this knowledge during evening hours. In medical professional training one attains a higher grade of culture and a greater variety of resources of knowledge that may be applied to every department of living, than is found in all the studies leading to any other degree in the educational world, and, therefore, one is lead into better paths towards happiness.

Heckel says that the ignorant member of a civilized community is surrounded by enigmas in every step, as is the savage, and that ignorance and indolence, not malice, are our most dangerous enemies.

Men of brains, intelligence and experience in the business world have come to realize that a grand opportunity for greater usefulness, happiness and better citizenship is now given them in the best equipped evening medical schools.

Harvey Medical College was the first to confine its lecture and laboratory work to the three hours of the evening, seven to ten, and distribute the majority of its clinics to other hours of the day and night. I have had the honor to be its working head for ten years, starting with nine students in September, 1894. It became the fourth in number of students in four years and has not yet lost that rank.

Clinical material and time for clinics are both abundant. What proportion of a student's practical obstetrical work can be done in the day time? Very little every one knows—Harvey has matriculated in ten years over twelve hundred students.

Dr. Billings: "How many of those that you matriculated graduated?"

Dr. Dickinson: "Only one tenth." We let adults in easy because the ordinary methods of entrance tests are an injustice and a farce applied to adults. We let them in comparatively easy, but they must show capacity, ability to carry and do their work or they never graduate. A goodly number leave to graduate in day schools. Night school teachers must spend as much or more time to prepare the lessons which they teach than it takes the students to learn them.

The emphasis given by the gentlemen from North-Western College to the study of fundamentals is fully in accord with the work at Harvey. The adult mind prefers to take the most elementary work in the sciences first. These principles once grasped, building upon them is rapidly and intelligently done by adults.

We all may remember successful men who told us that their study was all done by candle light, as they had not advantages of early

schooling. Should we then decry the study that is done under electric light or the white mantle? These also are better than the unsteady day light for microscopic work. Does the sun shine every day and all day long? Evening schools are always prepared for no sunshine, and never suffer by the moonshine of old worn-out gas jets. The white mantle light shines alike upon every table.

If I were running a day school, the lecture and laboratory work would all be done at night. Clinics in the afternoon and the students' leisure time be allotted to the morning hours when the least harm could come to him.

Two years' evening work in chemistry could hardly be sufficient, says the gentlemen from the North-Western. We heartily agree with him. Harvey runs the course of chemistry through three years, and the course of physiology through three years. This is just a little evidence of what I said before, that the schedule and the methods of teaching can not, in hardly any way whatever, be similar to the day school work, and the night school be an educational success.

A medical institution for research work and a medical institution for degree giving are two different institutions, and the hour of the day does not make either of them failures or successes.

We suggest that the Physicians' Club spend an evening in the place of a day school in the medical profession, to assist in allaying low grade commercial competition.

Fundamentals are well grounded in the adult mind in the evening medical school. The few or the many who wish these fundamentals and the first stories of knowledge that may be built upon them should not be debarred from these attainments because their only leisure time from the strife for bread and butter is in the evening. The intelligent few are always the marrow of the back bone of true civilization.

Evening schools do not compete with day schools. There are no fewer students in day schools in consequence of evening school existence. There are no fewer people crossing the ferries because the Brooklyn bridge was built. We feed the day schools thousands of dollars worth of students every year.

Yes, the evening school even dared to compete with university work, and just as soon as the examinations were made by a public board of examiners and given to graduates of all schools alike, the Harvey Medical College dared to pass even higher than all the universities but one, and that the North-Western.

Most adults, in order to exist, have employment through the day. Their work is often distasteful and uninteresting, which creates a lack of harmony between worker and work. Let the worker know that the end of the day he can do something for his own individual betterment, and then note the change in the disposition and accomplishment of his daily duties. Employers are beginning to realize this desirable change and also that more intelligent returns are to be had from the man and woman who has had scientific training. Employers are no longer opposed to night time training.

At no time in its history has Harvey failed to stretch out its arm to employer and employed alike in their effort for individual betterment ,knowing too well that out of the individual grows the aggregate, and that time which proves all things to the observing, will prove the worth of the effort.

Henry T. Lewis, Secretary.

CHICAGO LARYNGOLOGICAL AND CLIMATOLOGICAL ASSOCIATION.

A regular meeting was held December 6, 1904, with the President, Dr. John Edwin Rhodes, in the chair.

Radical Operation on the Sinuses, by the Killian Method.

Dr. Joseph C. Beck: The case I wish to show this evening is one of radical operation on the sinuses, by the Killian method. This man is interesting, not because he has had a Killian operation performed on him, but from the anomalous condition that presented itself during the operation, and the course of the disease. He is interesting also on account of the general symptoms he presented outside of the local ones. These general symptoms have been very clearly described by Hajek as being neuroses. When patient was in a large crowd of people he would perceive the peculiar odor of urine from his head, which became so disagreeable to him that he would run away from the crowd. Then there were pressure symptoms in one of his eyes, so that he could not see at times or very dim.

The patient was sent to me by a surgeon three years ago to get his nose free to respiration, because he could not be given an anesthetic. On examination I found large masses of polyps in both nostrils, and about two months after the operation on his stomach he returned to me for the treatment of his sinus trouble, which required intranasal treatment. I proceeded in the usual manner to ablate the middle turbinate bodies, resorted to intranasal curettement, and succeeded on the right side in stopping the suppurative discharge. I made four operations on this (left) side of the nose, curetting the cavity, but failed to stop the discharge, finding that the cells high up and laterally were secreting pus. I therefore recommended a radical operation by the Killian method, and as you are all familiar with the technique of it, I will not mention it.

Killian describes a very large frontal sinus in which it is not possible to carry out his technique properly. After the usual cut was made, with retraction I was unable to expose the entire sinus, and I satisfied myself in leaving a portion of the anterior wall of the sinus without taking it off. Three weeks after the oper-

ation the patient returned with a bulging on the front of the head, and I found there was a retention of pus. Readmitting him into the hospital, I reopened and found the sinus was full of granulations and pus oozing out. I extended the incision upwards in order to expose the entire sinus. I removed the entire wall and reestablished drainage into the nostril. Since then the patient has been comparatively free from any trouble. I do not wish to say that there is no suppuration here, because there is a little at one point. If you wipe it off and wait for twenty minutes, you will find there is a little pus which comes out from one of the cells, and I may have to reopen that through the nose and curette it. It is four months since the operation, and the frontal sinus is entirely obliterated. I cut down the floor of the frontal sinus and removed the upper wall of the orbital cavity.

Case II. I wish to show you another case that I exhibited at the last meeting. It is a case on which I made a plastic operation on the nose. I showed the patient before the operation, and since then I have succeeded in grafting a flap from the front part of the forehead into the nostril, and it has healed in.

Dr. O. J. Stein: I present this boy, who is 15 years of age, more as a case for diagnosis than anything else. He first came under observation in April, with a small growth in the right nostril. This was removed by a physician. He is said to have cut out a "piece of flesh," with a pair of scissors, threw it away, never examined it, and I do not know what the nature of it was. About four months after this the patient came under the care of Dr. Kleene, and at that time his nostril appeared a little worse than it does now. The whole floor is involved in a chronic suppurative process, with perforation through the cartilaginous septum. The left nostril was also involved in the suppurative process. There has been extensive necrosis of the intranasal tissue and marked infiltration of the turbinals, and, in fact, of all the intranasal structures. At one point I discovered exposed bone in the floor of the nose. The tonsils seemed to be involved in the same suppurative process. I saw the boy first I think about two months ago. I have not been treating him, as he has been under the care of Dr. Kleene. Several physicians have seen the patient and have given various opinions as to what his case may be. The wound, you will observe, looks clean now.

There are several points of interest in connection with this case. The history is practically negative, as far as syphilis and tuberculosis are concerned. When I saw him last the upper lip was so thickened and infiltrated that he could scarcely talk. His nostrils were bathed in pus, and the tonsils were necrotic. The parenchyma of the nostril is friable. It breaks away when you touch it, and bleeds readily. There is pus on the pharyngeal wall, and both nostrils contain some necrotic tissue. I thought it was a malignant condition at first, and said it might possibly be sarcoma, but after thinking the matter over I thought it might be a syphilitic process, and therefore advised that the boy be put on antisyphilitic treatment. This was done, and kept up for two months, but there was no improvement under that treatment. I removed sections of tissue from the right and left nostril and from the tonsil; had the tissues examined and it was reported to me that the diagnosis lay between sarcoma and inflammatory tissue. I took another section later on, about a week afterwards, and the report given to me was the same, but leaned a little more toward inflammatory tissue. The parties who examined these sections did not commit themselves. Slides were examined recently for tubercle bacilli, and Dr. Kleene says that they found something which looked like tubercle bacilli, and, in fact, in three or four slides he found a couple of tubercle bacilli. At one stage of the case it looked like a typical case of lupus.

In the way of treatment, the boy has received nothing but cleansing of the parts and dusting powders, with tonics and mercury and iodides internally. The adenoids which the boy had were removed by Dr. Kleene, and the wound healed very well.

I simply present the case for diagnosis, and shall be glad to get the opinions of various members regarding it.

Total Extirpation of Larynx; Resection of Most of the Pharynx and Part of Oesophagus in Carcinoma.

Dr. Herman Stolte: I have the honor to demonstrate an interesting specimen which represents a very far advanced, partly ulcerated carcinoma, very likely having started out of the sinus pyroformis, and having involved the whole larynx, the upper part of oesophagus, the lower pharynx, the left half of mesopharynx, including the left tonsil and part of the basis of the tongue. These parts were extirpated and resected four days ago from a man 49 years old, who began to complain about hoarseness not until seven months ago, and consulted a physician not until six weeks before his operation, when the diagnosis of inoperable carcinoma was made. A week from to-day he was sent to me to relieve him from his suffocation.

The patient was extremely emaciated, due to the impossibility to swallow, and suffered very much from dyspnea. As he had to undergo for relief of his ailments at least a tracheotomy and a gastrotomy, I determined to relieve him from his desperate and very sad condition by a radical operation in the diseased area. When the patient was laid on the operating table, he had a suffocation fit, and I had to hurry up to restore him by quick cricotomy by means of Butlin's obturator-canula, without an anaesthetic. After succeeding herein, the narcosis could begin through the canula. As there was to spare every drop of blood with regard to his bad, anaemic weak condition, especial attention was paid to this point and to a very careful narcosis, which was often interrupted by giving oxygen inhalation and hypo-dermical salt infusions. The course of the operation in which I followed closely

Gluck's experience and advice given in his last report, was following.

Two horizontal incisions extending from the middle of the right to the posterior border of the left sternocleido muscle, were performed the upper incision being made in one level, with hyoid bone, the lower one just below the cricoidcartilage. These two incisions are connected by a vertical anterior incision in the middle line of the neck. Skin and fascia are dissected off to both sides. Sternohyoid and thyreohyoid muscle are cut across on both sides on a level with the lower border of the cricoid cartilage. On the right side the muscle strings remain in connection with the skin flap. Not on the left side. Here they are sacrificed, as they are already involved by the cancer, which broke through the left thyreoid cartilage and pharynx. Ligature of the thyreoid superior artery on both sides. Both upper poles of thyreoid gland are dissected back from the larynx and retracted downwards, the left upper pole being resected, as carcinomatous. Incision of tough facial layer, which lies in front of trachea and retraction of thyreoid isthmus, until the first four tracheal rings come into view. Lateral aspect of the four rings are dissected free. Posterior surface of trachea allowed to remain undisturbed. Sternohyoid, thyrohyoid omohyoid insertions to the hyoid bone divided, and the right and left superior laryngeal artery tied off and divided, after having resected the upper horn of thyreoid cartilage. Now the entire anterior aspect of larynx was free.

Division of the Trachea.

Crico tracheal ligament divided and two guide sutures are passed through the anterior wall of trachea. By traction on these and on the sharp hook inserted in the cricoid. The tracheal wound is made to gap. Now the trachea is divided from cricoid along its whole circumference, and the oesophagus is peeled from the trachea for a distance of two centimeters by blunt dissection. The tracheal stump is drawn now to the level of the lower border of the lower horizontal incision, and here, with its anterior border sutured in by exact matress sutures. To form a button hole in the jugular for suturing in the trachea, there was not enough room, as the lower horizontal incision was made a little too far downward, due to the right-field being covered by the cricoid canula and its tampon. Both lower angles of the skin flaps were sutured exactly to the posterior surface of the tracheal stump. Now the tracheal opening is surrounded on all sides by skin and protected from blood flowing into it.

The anaesthetic is given now through a tracheal canula. On the right side now the pharynx wall (inferior contsrictor muscle and mucous membrane) is divided from the lateral larynx wall between clamps, a narrow, longitudinal piece of the pharynx is saved here and not detached from vertebra. On the left side the carcinoma involved the whole pharynx and part of oesophagus, therefore the upper part of oesophagus and lower and mesopharynx remains in connection with larynx and are peeled from the vertebra by blunt finger work. Now above the hyoid bone malohyoid and geniohyoid muscles are dissected from hyoid bone (upper surface epiglottis ligaments are dissected), and having divided the thyreo hyoid membrane above epiglottis close below hyoid bone in its whole extent to the horn, the middle and left part of hyoid bone is resected. Now the whole inner pharnyx above the epiglottis comes into full view, drawing the tongue root upwards, the thyreoid cartilage downwards.

The carcinoma is now seen to extend but to the upper limit of the left tonsil along the lateral pharynx wall. Therefore the tumor is circumscribed in healthy tissue and then complete shelled out with the finger in a blunt way, downwards. The lateral pharynx wall of mesopharynx and the posterior wall of pharynx is severed from the healthy parts by clamps and scissors. As the basis of the tongue below the posterior pillar of palate feels also somewhat hardened or infiltrated, these parts of the tongue are resected. In dissecting the lateral wall of mesopharynx the pharyngeal artery was hurt and tied with great difficulty. Now the diseased, everywhere dissected area in whole is taken out, pharynx, larynx, part oesophagus, the latter cut off one centimeter downwards from the diseased area above.

The stump can just be caught and after circular suture of the edges, it is fixed to the praevertebral muscles by a suture. A rubber tube, inserted in it, is fixed to its wall by a suture. The irregular remainders of the upper or mesopharynx, basis of tongue are sutured together with great difficulty in order to guarantee a closure against the wounded cavity as tight as possible to prevent mouth contents from flowing down and infection of the wounded cavity.

The whole cavity, especially all angles and corners as around the upper pharyngeal stump, and around the oesophagus behind trachea are carefully packed with iodoform gauze tampons, over which the skin is sutured.

Two long gauze tampon strips were passed out of the lower end of the wound for drainage purposes. Over the skin came an easy gauze compressive bandage.

Patient was ordered not to swallow but to spit out everything. Toward evening he was sitting up in bed and got his first feeding through the tube, inserted in the oesophagus stump. On the fourth day after operation he is absolutely free of fever and does not show any sign of irritation of the lungs.

As soon as the vitality of the patient is so much restored that he can stand a second operation I am going to remove the left sterno-cleido muscle, resect the internal jugular vein and all superficial and deep glands on the left side.

In about six weeks, he is going to get an artificial pharynx (rubber funnel with tube fitting in the funnel in back of his mouth), the remain-

der of the pharynx. The tube being passed through the pharynx and stump and led down in the oesophagus closed. With Prof. Glucks artificial larynx he will be able to speak again, provided he stands the second operation.

Discussion on the Cases of Drs. Beck, Stein and Stolte.

Dr. Otto T. Freer: It was not my intention to speak on this subject, but since Dr. Holinger regards the affection of Dr. Stein's patient as a tubercular one and refers back to a case of mine presented to this Society a year or more ago, as also tubercular, though at the time I think I proved it to be not so, I cannot refrain from saying a few words. In the case before use, all histologic proof of tuberculosis is lacking, as it was the case of mine in question. In both instances microscopic examination of excised tissue was made, negative as to tuberculosis in both. Now there is no disease process histologically more characteristic than tuberculosis, for even though in the ordinary slower cases tubercle bacilli are often not found in the tissues, at least giant cells and epithelioid ones in characteristic grouping are practically constantly present and in addition almost always some cheesy foci are discovered, while where the tubercular process is malignant, causing rapid ulcerative breaking down of tissue, though in some regions the histologic appearance may be less characteristic, tubercle bacilli are nearly always found in the tissues and sometimes in great abundance.

The clinical picture in this case is certainly not in accord with the theory that the very destructive process presented is tubercular, nor would this process be likely to be arrested as this has been if tuberculosis were its cause. Not only would such a rapid tuberculosis as this would be not to come to a standstill, but it would be associated with grave constitutional symptoms, emaciation, hectic fever and probably, especially in one so young, involvement of the lungs, for tuberculosis increases in malignancy in proportion to the youth of the patient. The fauces and palate are ordinarily not attacked by tuberculosis unless the disease be of a grave type with profound general symptoms, yet the disease process presented by this healthy looking boy has invaded the fauces and palate extensively. As an example of the malignancy of tuberculosis when it involves the fauces I cite the case of a young woman whom I saw in the clinic at Rush Medical College. She presented an infiltration of the anterior and posterior pillars of the fauces on the right side, with pinhead ulcerations of the soft palate. The tonsil was apparently healthy, merely the pillars being involved in thickening and nodular infiltration. I cut away a large portion of the anterior pillar and made microtome sections of it, which showed giant cells, epithelioid cells in typical tubercular arrangement and tubercle bacilli in the tissues. The young woman was at that time in fairly good health, although she was having a temperature of 101° to °102 in the afternoon, as stated by her attendant. When I heard of her, four weeks later, she was practically moribund. The diagnosis had hardly been made when we learned that she was dying from tuberculosis.

A number of years ago, in a conversation with me, Dr. Casselberry alluded to his experience with the rapidly fatal course of pharyngeal tuberculosis

For these reasons I do not think that Dr. Stein's case is one of tuberculosis.

Dr. Freer: The process in this case has involved the fauces and soft palate, and that is a different story. The disease is not confined to the anterior part of the nose, but as I have stated, it has invaded parts in which tuberculosis usually pursues a very rapid course.

Dr. William E. Casselberry: I would like to ask Dr. Stein by whom the histological examination was made.

Dr. Stein: It was made by Dr. Evans, of the Columbus Medical Laboratory. He did not report finding tubercle bacilli. There was nothing in his findings typical of tuberculosis at all, but an examination was made recently for tubercle bacilli, and there were a few found by Dr. Kleene, but while this was suggestive, they did not take the actual stain.

Dr. Brunson: To what extent was antisyphilitic treatment used in this case?

Dr. Stein: It was used for about two months. In addition to the antisyphilitic treatment, the patient has received tonics, and while there is considerable glandular enlergement, in the main he has improved as to local appearance, but the general appearance is about the same.

Dr. P. J. H. Farrell: In cases of this kind the local use of bichloride, 1-500, gives excellent results. Where other treatment had been carried on for eight or ten weeks, without any beneficial results, by using topical applications of bichloride it has cleared up the diagnosis very nicely. I have the patient use the solution three or four times a day. I formerly depended upon calomel as a local application in syphilis of the nose, but results are better by using the bichloride solution. This case, I think, will prove to be syphilis.

Dr. Joseph C. Beck: I had the pleasure of seeing this case at Dr. Stein's office about six months ago, when we made a careful examination. Dr. Stein did not mention the condition of the teeth, and did not tell us about the condition of the patient's mouth. At the time I saw him the appearance of the mouth and nose was about the same as it is to-day. I believed at that time that this was a case of syphilis, and suggested mercurial inunctions; also that the tuberculin test be made. I understand from Dr. Stein, however, that this test was not made. From the condition then and the condition of the teeth, my diagnosis would be syphilis.

Dr. E. Fletcher Ingals: I would not hazard a diagnosis in the case under discussion, but

in all of these obscure cases it is not worth while to spend much time in looking for a rare disease, for in ninety-nine cases out of a hundred they are syphilitic. Of course, the hundredth time we may make a mistake. I do not think this boy has tuberculosis, and if it is not tuberculosis it must, excepting under the remotest possibility, be syphilis or sarcoma. The boy's nose is pretty thoroughly filled an inch back from the nostril, and at first sight appears like sarcoma, but from the extension of the disease to both tonsils and the pharynx, and from the comparatively long duration of the affection we might almost exclude sarcoma.

With reference to Dr. Stolte's case, he did a most skillful operation, and one that many of us would hesitate long before undertaking. I shall be much interested in the outcome. He has had one good fortune, in that the patient has lived so long (2 days) after the operation. As he stated, there was "nothing to lose," as the patient understood the dangers and desired the operation.

Dr. Clifford S. Losey read a paper entitled **Myringoplastic Surgery, with Exhibition of a Case.**

We find in the literature of deafness and its relief that mechanical devices have been used since the days of the ancients, with the hope of restoring hearing, but more particularly since the sixteenth century have these devices been made and improved upon with more or less success.

The type of deafness which will be considered in this paper is that form which follows chronic suppuration. How often do patients come to us complaining only of deafness, when on examination we find the ears discharging, a fact they frequently seem to ignore. What they desire is hearing, and I regret to say the otologist is frequently unable to accomplish the desired result.

From now on let it be understood that these ears have become dry through some mode of treatment and are in the so-called cicatrical stage.

Many forms of artificial drum-heads have been invented—those of Toynbee and Yearsley being probably the best known—and have been used with some success. The best form of artificial drum-head that I am familiar with is one used by Dr. Pierce. The method of preparing it is as follows: Place on the blade of an ordinary spatula a small amount of parafin, hold over a Bunsen flame and allow it to melt. Now, before it has time to cool place over it a few strands of crossed cotton fibres and press tightly. On cooling the parafin is imbeded in the meshes of the cotton and is readily removed from the blade in the form of a very thin layer. This is cut to size a little larger than the perforation and placed in position with forceps. This disk is aseptic and can be medicated with almost anything that is desirable. It is pliable enough to be molded to any surface and has sufficient adhesive power to hold it in position. However, any artificial drum-head is occasionally irritating to the ear, and if worn continuously, very frequently causes a return of the suppuration. The object, therefore, to be obtained, is a new tympanic membrane.

Berthold, who has written most extensively on this subject, decries the use of caustics and applications of stimulating drugs to the edge of old perforations, saying they produce very little results. In 1878 he was the first to transplant skin from the arm to the tympanic membrane. About 1880 he began to experiment with the membrane lining of the shell of an egg. His method was to roughen the edge of the perforation and apply a portion of the membrane cut a little larger than the size of perforation. First he applied the inner side of the egg membrane to the perforation and found that it remained adherent for a few days, then it became dry and shriveled up. Following this, he experimented with the egg membrane by planting it on the periosteum of the guinea pig. He found that when the innerside of the membrane was applied to the periosteum it was the same as when applied to the tympanic membrane, but when the outerside of the egg membrane was applied it was found to retain its color and size, and in a short time leucocytes began to appear, then granulations and finally blood vessels. Within six or eight weeks this membrane was found to be firm and adherent to the periosteum and hard to differentiate from it. The process of applying the outside of the egg membrane was now tried on the tympanic membrane, and contrary to the other mode of application the membrane remained adherent and the same process occurred as when applied to the periosteum. After about eight weeks it had taken on the color of a normal tympanic membrane.

The cases for myringoplastic work of course are selected. The hearing should be tested, then the best form of artificial drum-head should be applied, and the hearing again tested. If there is no improvement in hearing with the artificial drum-head, closure of the perforation should not be attempted, because when the perforation is closed sound waves must pass through the ossicles, and when they are ankylosed or adherent, such will not be the case, where, with the perforation, sound waves are received directly on the foot plate of stapes.

I do not wish to lay any claim for originality in bringing this method before you, but with the hope of stimulating interest and discussion and trying to find the reason that it, or some other method, is not more frequently used, because when the results are good they certainly pay for any amount of time and patience they may have cost.

The technique is as follows: Given a selected case with a dry perforation: increase of hearing with artificial drum. We now clean the ear as thoroughly as possible with cotton pledgets, wind tightly a small piece of cotton on a small applicator and saturate with tri-

chlor-acetic acid. Now, under good illumination, touch the edge of the perforation, taking care not to allow any of the acid to come in contact with the promontory. It is well to inflate the ear before making the application so as to push the tympanic membrane as far away from the promontory as possible. Following the application there is immediately found a white escar, showing where the acid has been applied; there is also some sharp pain lasting for a few minutes. A pledget of cotton is now placed in the external canal and the patient directed to return in two or three days. At this time, on inspection, there is found a crust formed over the edge of the perforation. The crust is loosened by the application of some light oil, such as liquid alboline and taken out with forceps. The ear thoroughly dried. Now, the edge of the perforation is found to be red, with beginning formation of granulation tissue. The ear is inflated and the tri-color-acetic acid again applied as before. After the second or third sitting one can generally see that the perforation is beginning to close. The applications are repeated just as often as the ear will stand it, depending entirely upon the amount of reaction. The main thing to guard against is adhesions of the tympanic membrane to the promontory. Different tympanic membranes react differently. Some will rebel against the use of the acid, and consequently the applications have to be made less frequently; again, some membranes regenerate very rapidly under slight stimulation.

The closure of large perforations is a slow procedure at the best, and requires time and patience, both by operator and patient.

I dont' want to appear too enthusiastic on this subject, but it seems to me we have not given it the attention it deserves.

A Case of Myringoplastic Surgery.

Mr. O. A., 26 years of age, packer in a wholesale grocery store, presented himself at Dr. Pierce's clinic at the Chicago Polyclinic Post Graduate School in August, 1900. He complained at that time of hardness of hearing, with a purulent discharge from both ears since childhood, folowing scarlet fever, gradually getting worse. There was no pain or tinnitus. His family history was negative.

On inspection the canals were found to be bathed in a thick discharge, which had a foetid odor. After cleaning with pledgets of cotton, the tympanic membranes were found to be destroyed with the exception of a part of the membrana flacida and anulus of membrana tympanic. The muco-periosteum covering promontory was granular; part of the handle of both malelı necrotic.

The hearing for conversational voice was 18 in., whisper 1 in., for both ears. The first step in the treatment of this case was to stop the discharge, which was done by packing with dry borated gauze. After the ears became dry they were again tested with practically no improvement in hearing. They were tested with artificial drums (pledgets of cotton saturated with liquid alboline and placed against the ossicles). Hearing in both ears was very much improved. Then came the question of the advisability to close perforations. Upon the suggestion of Dr. Pierce, the edges of the perforation in the left ear were stimulated by the application of tri-chlor-acetic acid. The second day after the first application patient again presented himself, and upon examination there was found to be a crust formed over the rim of the perforation. This crust was loosened by the application of liquid alboline, taken out by forceps. Tri-chlor-acetic acid was again applied, patient returning again on fourth day. After removing the crust at previous sitting, it could be seen that new tissue was beginning to form and the applications were continued at intervals of two, three or four days, depending upon the amount of reaction; occasionally there was found to be a slight mucous discharge, due to over-stimulation. After about four months of repeated applications the tympanic membrane again became intact. The ear was again tested, and hearing for conversational voice was found to be about normal in the ordinary room, whisper could be heard distinctly at about four feet, the mobility of the new tympanic membrane being good.

The result of the left ear was so gratifying it was decided to try the same treatment on the right, and the same results were obtained, with the exception of the mobility of the membrane, in the right ear there is a small adhesion in the posterior portion. It has now been about two years since patient was discharged, and the result is still very gratifying to me and a great comfort to the patient.

Discussion.

Dr. Norval H. Pierce: I had the pleasure of seeing this patient when he came to the Policlinic, and I had little hope of the perforations closing at that time. The perforations were very large and involved nearly all of the pars tensa. That these very large perforations can be closed is very gratifying. Trichloracetic acid is used for the closure of these perforations at my clinics of the Illinois Eye and Ear Infirmary and at the Policlinic. I believe that these cases are neglected more than they should be. It is a rather trying ordeal to go through with on part of the patient and physician, but I know of no better method of closing the perforations than by means of this procedure. I have tried the skin of the egg; I have tried skin flaps; I have tried collodion, but I have found no method as universally successful as the one that has been described. But even with this method (trichloracetic acid) we are not always successful.

The artificial drumhead Dr. Losey mentioned is a very simple and satisfactory way of temporarily closing these perforations. I have occasionally etched with trichloracetic acid, and then applied the drumhead, and seemingly without irritation. In many cases there may be a slight transient discharge after the edges are etched, but that is not to be feared. Dr. W. J. Montgomery told me of a case in which he applied the artificial membrane in both ears, and the patient went away and did not return for

something like eighteen months, when both perforations were found to have closed, and the artificial membrane was still up against the new tympanic membrane.

Dr. Geo. E. Shambaugh: I desire to congratulate Dr. Losey on the excellent result he has been able to obtain in this case. I remember seeing this case five or six years ago, and I recall distinctly the appearance of his ears at that time. There was almost complete destruction of the pars tensa of the membrana tympani in both ears. The ossicles were not disturbed. At that time I demonstrated him before the class as a case where the hearing could be greatly improved by the use of the so-called artificial ear drums. By placing a small pledged of cotton dipped in vaselin against the remnant of the membrana tympani his hearing for the whispered voice was at once increased from one foot to about fifteen feet.

The use of such devices to improve the hearing is rather limited. In the first place there are few cases where an improvement is obtained where such a device is worn, and in the second place there is only a limited number of these cases where the ear will tolerate the foreign body in the ear. So that when everything is considered the number of cases is rather small where the use of an artificial drum membrane is justifiable. The case must be one where the hearing is so defective as to make conversation difficult, it must be one where the application of the device improves the hearing sufficient to justify itself, and it must be a case where the ear will tolerate fairly well the wearing of the instrument.

Artificial drum membranes have long been a favorite catch work for quacks, and many high priced devices are advertised under this heading as a certain cure for all deafness irrespective of its cause.

I recall seeing a patient in the Dispensary who had paid some druggist $10.00 for two little membranes which ordinarily cost five cents each and had worn them in her ear until on one side it had produced an ulceration of the membrana tympana, and suppurative otitis media, while all the time her deafness was due to trouble in the internal ear, and could in no possible way be benefited by any device of this sort.

Dr. Randolph Brunson: I have a case to report in connection with Dr. Losey's paper, which I saw recently, in which there was suppuration in both ears, with perforation. The perforation in left ear was in the inferior posterior quadrant of the drum, and the patient called my attention to the fact that he could hear better with that ear if oil or something else was put into the ear. I wiped out his ear thoroughly and took some glycerine and closed the perforation. About a drop was sufficient to produce perfect closure of the perforation. I tested his hearing before this and he could hear a loud conversational tone at about twelve or fourteen inches. After the glycerine was applied, for talking in an ordinary conversational tone he could hear at about eight feet. After finding this out, I thought of the method of treatment by trichloracetic acid, for closing the perforation, applied it and I think after about the sixth application, which was given four days ago, the man can now hear the ordinary conversational tone fifteen or eighteen feet away. The perforation is almost closed, and I should say there is possibly a space as large as a pinhead still remaining. Hearing has been so materially improved that it is surprising to me we can get such results in such a short space of time, and at the same time close up the perforation so satisfactorily.

Dr. J. Holinger: The results the doctor obtained in closing perforations in chronic suppurations are very good ones. He reported two cases. Before our judgment is final we should have larger numbers. The greatest difficulty always is to get the middle ear completely dry, i. e., to stop the suppuration. That being accomplished the opening usually closes. In a number of instances I have been surprised to find the perforation closed in a comparatively short time, when I did not expect it would ever do so.

The application of trichloracetic acid is very satisfactory, and I think most of us have had more or less experience with it, good as well as bad. The satisfaction it gives us in one case was upset by other unfavorable results, where, after the application of trichloracetic acid, no matter how carefully it was done, suppuration loomed up anew and with it all the symptoms of acute inflammation of the middle ear.

As to the use of artificial drumheads, I trust you will pardon me for digressing a little from the subject under discussion. There are a great number of artificial instruments on the market for the purpose of increasing or improving hearing. Very few have stood scientific tests. Sooner or later we should take a positive stand in regard to their use. An electric instrument called "acousticon," is advertised very extensively. It has been bought by a number of patients, and discarded sooner or later. The Committee on Awards of the St. Louis Exposition gave it a gold medal. It seems to me we owe it to the profession as well as to our patients after careful tests to take a stand in favor of or against such instruments and inform the public what we think of them.

I made a short test of these instruments in St. Louis and found that with them the accidental noises were so much increased that they drowned the voice, making it impossible to hear an ordinary voice. I think we can accomplish a great deal of good both for the profession and for our patients by presenting the facts in regard to these artificial aids.

A Case of Recurrent Fibro-Lipoma of the Pharynx and Larynx.

E. Fletcher Ingals, M. D. This patient S. W., a man 28 years of age, came to me February 9, 1899, complaining of difficulty in breathing, speaking and swallowing. He stated that five years previously he had noticed a little difficulty in breathing at night; later that the speech became muffled and that two years later he began to have some difficulty in swallowing though there had been no pain on deglutition. In the fall of 1896 the growth had been cauterized by

the electro-cautery and various efforts had been made with a snare and scissors to accomplish its reduction, but only very small pieces had been removed, although this, he thought, gave him little relief for some months. He afterward grew gradually worse. Immediately before he came to see me the interference with swallowing had been moderate, but there had been much difficulty in breathing especially at night.

I found the voice much muffled, with dyspnoea upon any exertion, but he breathed fairly well when at rest. Upon examination, I found a large tumor having the appearance of a fibroid nearly filling the laryngo-pharynx leaving a space only about ¼ of an inch in width at the left of the laryngo-pharynx. I was unable to see any part of the larynx excepting the pyriform sinus and the pharyngo-epiglottic fold of the left side. After several attempts with a No. 5 piano wire snare which broke each time, I finally succeeded in removing the greater part of this tumor with a uterine ecraseur and armed with a No. 8 piano wire, the end of which I had bent for the purpose. I subsequently removed several small pieces and finally destroyed by cauterization the last remaining nodule so that on March 20th, about 4 weeks after the first operation, the growth appeared to have been completely destroyed and the patient was discharged. The Pathologist reported the first mass removed to be a fibrous growth and the later masses lipomatous tissue. The whole tumor was about 4.5 by 3.8 c. m. in its various diameters. This case I reported to the American Laryngological Association in May, 1899.

On the 2d of November, 1904, this patient returned to me and reported that he had noticed some symptoms of a return of the tumor, about a year ago. Upon examining the laryngo-pharynx, I found a large mass extending from the base of the tongue downward to the arytenoid cartilage attached by a broad base to the right side of the pharynx and also attached to the right edge and anterior surface of the epiglottis. This tumor about 3-5 filled the laryngo-pharynx allowing me to see only about 3-5 of the epiglottis and of the lower portion of the larynx. The tumor was smooth in appearance, sessile, appearing to have no pedunculation, although the lower part looked as though it might possibly be engaged in a snare. The tumor appeared to be at least 5 c.m. in length and to stand out from the wall of the pharynx about 2.8 c.m. and to measure from before backward about 3.5 c.m. It was so soft to the touch that I suspected it was filled with fluid and I was inclined to believe that I had to deal with a branchial cyst. The next day I attempted to aspirate the tumor, but was unable to do so and was obliged to get a special instrument made for the purpose. On November 8th, I succeeded in getting a long strong bent needle which I attached to my aspirator syringe, with which I punctured the tumor in two or three places, but I found that it had no fluid contents. However, it receded so before the pressure of the aspirator needle that I could not yet believe that it was a solid growth. I finally anaesthetized the parts with a strong solution of cocaine and with an unusually heavy snare armed with No. 8 piano wire, I succeeded in catching the greater part of the growth in the loop, but as the snare was tightened, at least one-half of the tumor at the upper part slipped out of the snare so that I could only hold the lower part of it which after it had been cut off, measured 3.8 c.m. in its largest diameter and about 2.8 c.m. in its smallest diameter. I tightened the loop on this portion of the tumor gradually and instructed the patient to draw in a very deep breath just before I finally cut the tumor off, then as the wire had nearly cut this through, I had the patient hold his breath and pulled upward on the tumor as the piece was cut off, and brought out of the mouth. In case this piece had fallen so as to obstruct the larynx, the air in the chest would have enabled the patient to cough it out. Immediately after removing this mass the patient said that he was choking and I saw that he was unable to get his breath. He quickly became cyanotic and soon stopped breathing entirely. One of my assistants rushed for an O'Dwyer tube which I did not have time to use and I seized a large Schroetter dilator and attempted to pass it into the larynx but did not succeed as the muscles were becoming so rigid that the patient's teeth shut down firmly upon my finger and I had to get the instrument and finger out as quickly as possible. By this time the man had fallen upon the floor in a narrow space and most awkward position, but seeing that death was imminent without a seconds delay, I called for a knife, which one of my assistants handed me, and I made a rapid low tracheotomy. I succeeded with the second cut in opening the trachea and then passed my finger into the opening and by it directed in the Schroetter tube which I had just used in the trial to enter the larynx; this took only 3 or 4 seconds. There was a large flow of venous blood, but turning the patient upon his side I succeeded in preventing most of this from going into the trachea and the Schroetter tube so nearly closed the opening that there was not much subseqent danger. We set up artificial respiration as well as we could in the awkward position, being unable to manipulate only one of the patient's arms, because it was necessary for him to lie upon the side. In the course of 10 or 15 minutes, we were rewarded by having fairly good respiration and we felt that the patient was out of immediate danger. Subsequently with the patient still upon the floor, I grasped such bleeding points as I could discover with haemostats and later tied several of them. Finally after about an hour the patient seemed well enough to sit up and as there was no bleeding I introduced a hard rubber tube which was the largest tracheotomy tube I could find in two of the large instrument houses in the city, but it was too small; however, it had to answer the purpose. I then examined the larynx but was unable to get a good view, because of the blood and mucous in the mouth though there appeared to be a mass of the tumor lying in the lower portion of the laryngo-pharynx. Presently I found that blood was trickling down from the lower portion of

the wound in the neck and I then placed the patient upon a table and sought further for the bleeding points. I discovered that the isthmus of the thyroid had been partly cut away in the hasty operation and I was obliged to secure all the bleeding points by suture and ligatures. At the end of about two hours after the unfortunate accident the bleeding had been thoroughly controlled and the patient was fairly comfortable, though necessarily much weakened, the pulse being 140. Another examination of the throat failed to give any more satisfactory view than the one previously. I found that the patient breathed fairly well through the tracheotomy tube and sent him to the Presbyterian Hospital giving directions that the tube should be cleaned every hour or the inner tube be left out if necessery. The patient was to be kept in a room with a temperature of 80° F. and a moist atmosphere. These directions were carried out but the next morning the nurse in attempting to clean the inner tube placed it in hot water and it straightened out so that we were not able to use it again. The patient was unable to breathe through the larynx and could not swallow because of some obstruction in the laryngo-pharynx. An inspection showed what appeared to be a portion of the tumor filling the laryngo-pharynx and completely closing the larynx, but the neck was so sore and the patient so weak that nothing was done for its removal until several days afterward. For 36 hours after the tracheotomy he was fed by nutritive enemata; then a stomach tube was introduced without great difficulty and subsequently he was fed in this way until the obstructing mass was removed. During the first few days he had a temperature running from 101° to as high as 104° with considerable inflammation in the neck. Finally when this had subsided and the patient had gained strength so that he could sit up without fatigue, I anaesthetized the throat with a 20% solution of cocaine; then guided by a throat mirror I grasped the tumor with a vulcellum forcep that I had made from a uterine forcep and I passed down over it the loop of a No. 8 steel wire with which I had armed a strong snare. I engaged a considerable mass of the tumor and soon cut it off without difficulty. It measured 3¾ c.m. by 3⅜ c.m. and 2 c.m. in its various diameters. I then found that although the laryngo-pharynx was free ,the larynx was still partially obstructed by another small portion of the tumor which I removed in a similar way. This piece was about 1-6 the size of the one that I had just removed. The laryngo-pharynx and larynx were then perfectly free so that there was no interference with respiration or deglutition, but there still remained quite a large mass of the tumor on the right side of the pharynx beginning about half an inch below the level of the base of the tongue. This appeared to measure from 2 c.m. to 3⅜ c.m. in its various diameters. I attempted to catch it with the loop but there was no place where the wire would hold. I attempted also to catch it with cutting forceps, but in this I was equally unsuccessful as the growth would crowd away from the instrument and no part of it could be seized. Finding it impossible to secure it in any way, I determined that the best thing for the patient would be to have it removed through an external incision and I so advised; however, he declined further operation and on the 23d of November I removed the trachea tube and a couple of days later allowed the patient to go to his home. I was at a great loss to understand why there should have been the sudden choking after the removal of the first piece of the growth but after inspecting the throat I was led to believe that it was due to a part of the very movable tumor having fallen through the opening made in the mucous membrane by the removal of the first mass. The examination of the last portion of the tumor removed showed that it did not have a mucous covering and confirmed my view of the cause of the accident. Although such an accident as this from a portion of the tumor falling through an opening made by removing a part of it, could not occur excepting in extremely rare instances, this case illustrates the necessity of being prepared for emergencies when operating in the throat. The plan sugested of having the lungs filled with air and the patient holding the breath is generally efficient; the Schroetter dilating tube is also very valuable as a means of preventing strangulation, but in addition, assistants and the instruments for a quick tracheotomy should be at hand.

The three different pieces removed were examined microscopically and Dr. Peter Bassoe, pathologist at the Presbyterian Hospital, furnishes the following pathological report:

2d piece removed weighed 6 grams. Measured 3.8 by 3 by 1.5 c.m. The attached surface measures 3.2½ c.m. almost circular, of whitish color. The remainder of the surface is covered by a thin fibrous capsule and is grey in color. At one point a fibrous tag 8 m.m. long projects 3 m.m. from surface. Consistency, soft and spongy. Cut surface, whitish color with yellow tinge. Little blood is seen except close to surface. Smaller piece, weight 1.5 grams. Tissue resembles first.

Microscopic: The fibrous capsule is seen to be very thin. The tumor is seen to be composed of intermingled adipose tissue and fibrous connective tissue in about equal proportions. The fibrous tissue is rich in cells, most of which are of the fibro blast type but there are also many small inflammatory mononuclear cells and in places considerable number of polymorphonuclear cells. Blood vessels are rather abundant in the fibrous tissue and contain many polymorphonuclear cells. Their endothelial cells are large and rich in chromatin.

Diagnosis: Fibrolipoma with inflammation.

I am much indebted for efficient assistance during or subsequent to the hasty tracheotomy to Drs. J. C. Dill, J. Z. Bergeron, N. P. Colwell, S. A. Friedberg, E. L. Kenyon and J. F. Waugh. Dr. C. McDonald took care of the patient at the Hospital and aided Dr. Peter Bassoe in the microscopic examination.

34 Washington St.

Discussion.

Dr. William E. Casselberry: I think one of the most important phases of this paper is the point raised as to the proper procedure to remedy such an accidental sudden asphyxia.

I have several times found it necessary to make a hasty tracheotomy on patients who were already moribund, and in perhaps four or five such cases that I now recall I made the same operation that Dr. Ingals describes a hasty low tracheotomy and encountered the same inconveniences and dangers incident to haste in opening the trachea at that depth. I made such hasty low tracheotomies simply because I felt most familiar with that route, having practiced it in other more deliberate cases, and hence being less familiar with the route of high tracheotomy.

The liability to cicatricial stenosis is a valid objection to high tracheotomy and larygotomy when the tube must be retained in position for a prolonged period, and yet this would not pertain to emergency cases in which it is evident the tube would be needed but a short time. The classical high tracheotomy embraces the region of the thyroid isthmus which cannot always be readily "pushed down," and is liable to require a more careful dissection to avoid hemorrhage than even low tracheotomy. But for emergency cases it would seem that there is sufficient space between and embracing the crico-thyroid membrane down to, but excluding the thyroid isthmus. The books, especially of certain surgical works, commend this route for a hasty opening, "even with a penknife," and state that the crico-thyroid artery is usually too insignificant to be troublesome, and can be avoided by entering the scalpel edge downward; yet I have not known this route to be used, and as before said, I have not myself practiced it, and my objects in discussing it is to elicit from Dr. Ingals, in closing the discussion, just why he selected low tracheotomy in an emergency in preference to a higher laryngo-tracheotomy in his case, and to get his views as to the feasibility of the higher operation in such emergency cases, in view of the difficulties he described in his hasty entrance of the trachea at the deeper situation.

Dr. Otto T. Freer: There is one objection to perforating the crico-thyroid membrane in the performance of rapid tracheotomy, and that is the presence of the crico-thyroid artery which crosses the upper part of this membrane and is a vessel large enough not to be insignificant.

Whether one may make a high emergency tracheotomy without severe hemorrhage or not is large determined by the position of the isthmus of the thyroid gland. If this be situated high up so that it covers the upper rings of the trachea, as far as the lower border of the cricoid cartilage, it is not possible to make the opening through these rings in rapid tracheotomy without serious hemorrhage, especially as the superior thyroid arteries usually form an anastomosing loop across the upper border of the isthmus. The presence of a central thyroid lobe, which may extend upward high enough to cover the cricoid and the thyroid cartilages, makes not only a high tracheotomy impossible but also excludes either cricotomy or the making of an opening through the thyrohyoid membrane as permissible procedures.

For emergency operations where no central lobe of the thyroid gland is in the way, the best operation seems to me to be the division of the cricoid cartilage with nicking of the thyrohyoid membrane above it, for in this region no vessels will be encountered so that there is no bleeding to prevent the immediate holding open of the cricoid ring with retractors. The cricoid cartilage is also the most readily palpable portion of the air passages in the neck, with the exception of the thyroid cartilages, and the operator has no difficulty in immediately finding it. Of course where an obstruction is situated in the upper trachea and lower part of the larynx the division of the cricoid ring is useless and a low tracheotomy is the only resource left.

Dr. J. Holinger: The troubles Dr. Ingals met with may be avoided by the operation that Kocher devised some time ago for the removal of growth from the pharynx and upper larynx. It consists in a transverse cut just below the hyoid bone, and by avoiding large blood vessels, causes very little hemorrhage. It makes the field of operation very accessible.

Dr. Ingals (closing the discussion): In reply to Dr. Casselberry, I selected low tracheotomy was because I had fear of cutting the isthmus, an accident to which Dr. Freer referred, and I could feel the trachea easily. I have done quick tracheotomy several times, but never one with the extreme haste which was necessary in this case. I have felt for many years that if I had to do a quick tracheotomy, I would catch the trachea with a tenaculum, and then I would be in a position to draw it up and divide the rings with a good deal of accuracy, but I did not have time to get a tenaculum in this case.

Dr. Norval H. Pierce exhibited Killian's latest models for esophagostomy, laryngostomy, tracheostomy and bronchostomy, together with a phantom for exercise in the foregoing procedures. He also showed instruments for submucous resection of the septum, frontal sinus surgery, and so forth.

CHICAGO NEUROLOGICAL SOCIETY.

The Chicago Neurological Society met November 17, 1904, with the president, Dr. Sidney Kuh, in the chair.

Probable Multiple Sclerosis, With Suspicious Family History.

History: This case was presented by **Dr. L. Harrison Mettler.** The patient was 32 years of age, married ten years, and had had two children, both well. The wife had been perfectly well. There was no neuropathic history except as follows: the paternal grandparents were

first cousins; the paternal uncle, aunt and the patient's father were congenital deaf mutes; the patient's mother was rendered a deaf mute in childhood from scarlet fever, and he himself was the weaker of twins. He had the childhood diseases without sequelae, and denied specific infection, living an even and moderate life, and was perfectly well up to the time of his marriage.

Eight years ago he first noticed the beginning of his trouble, when he was taken with a relatively sudden numbness in one hand, and later on, in the leg of the same side. He dragged his numb foot for quite a time. Patient subsequently had two attacks of numbness, paresis, weakness and dragging of his foot, and his condition grew worse each time. His wife described his speech as difficult and delayed, "as though he had his mouth full, and jerky." Dr. Mettler said he did not show much of that. No head ache, no pains, no sensory symptoms, no bladder trouble. A year ago last August he had a third similar attack. The patient's eyesight had been unaffected until recently. There was some slight paleness of the disc in July. The mental condition was stated to be of the markedly depressed, melancholic type.

Dr. Chas. Mix said that the patient showed a partlysis of the left internal rectus, a little adduction of the foot, hardly a bit of paresis but much spasticity, and that his extensors were stronger than his flexors. The right pupil was suspicious. These irregularities were important points in establishing a diagnosis. Dr. Mix added that of the four cardinal symptoms of disseminated sclerosis, three were out at present, and asked if there was any possibility of optic neuritis or optic atrophy.

Dr. Chas. Lodor raised the question of the condition of the vascular system, and said that the heart skipped every third of fourth beat, that there was a murmur heard at the apex of the heart and a decided aortic click. The radial artery on the right side was certainly very much harder than 32 years, and that there was a marked sclerosis, such as is seen in the secondary stages of syphilitic trouble.

Dr. Harold N. Moyer thought the diagnosis of multiple sclerosis presented the highest possibility, though the case was not typical. He further said that the disseminated scleroses do present some of the most extraordinary and bizarre pictures at times, and a great many things pointed to that diagnosis in the case presented. One point was his mental and emotional state. Nothing clearly excluded multiple sclerosis. That he had combined degeneration, the history, the progress and the clinical picture made evident, and for reasons stated, Dr. Moyer believed multiple sclerosis was the for more probable lesion. Its distribution in any given case determined the symptoms largely, and diagnosis was often not possible for years after the commencement of the disease.

Dr. Sydney Kuh said that it seemed to him that the diagnosis lay between two things: Either a disseminated sclerosis or else syphilis of the central nervous system, and while all the symptoms might occur in both these, they would be more liable in syphilis than in disseminated sclerosis. The condition of the pupils would be more liable to occur in sclerosis. This patient had an irregular pupil. The early occurrence of sensory disturbance, the early appearance of bladder symptoms, the contrast between the very slight rigidity and the spastic gait suggested the possibility of syphilis. There could be no possible harm in gentle, moderate antisyphilitic treatment, and there might be good come of it.

Dr. Specht replied that this had been done six years ago and carried on for months. The patient had had potassium iodide, 10-15 grains, three times a day for months, followed by the iodide of mercury, a considerable dose, for some time. He seemed to get better at times, but the gain apparently could not be attributed to the remedies.

Dr. Mettler brought up the question as to whether any reliance might be placed upon the family history, and whether it might be a factor in producing the patient's present condition. It seemed so to him. There was a degenerative condition running through the family, or at least, there were defectives. Dr. Mettler did not think he had syphilis, and closed the discussion by saying that he was especially interested in the pathological side. It has been laid down that multiple sclerosis is absolutely non-hereditary, yet a few cases have been reported where mother and daughter had multiple sclerosis, and a number have been reported where heredity played a striking role, bringing the disease in the class of degenerative troubles, and some have thought that there were two conditions, and one of these a family type. Five cases were reported in one family. Taking everything into consideration, Dr. Mettler thought that if the diagnosis be correct, there may be something in heredity that might change the hard and fast rule enunciated.

Progressive Bulbar Palsy, with Beginning Amyotrophic Lateral Sclerosis: This case was presented by **Dr. Julius Grinker,** who said that the patient was 58 years old and had not been able to speak for some time, though his intelligence was good. Some time after the dysarthria had appeared, the man had experienced difficulty in swallowing, particularly liquids. This condition had been growing worse, so that life was maintained by ingesting small quantities of food at short intervals. The patient had frequently to assist the bolus of food with the finger or spoon towards or into the pharynx. Choking spells were not unusual with him. Of late, he complained that his head had become so weak that he was compelled to hold it up with his right hand to keep it from falling forward.

The patient was an old man of medium height, with head resting upon his sternum and chin somewhat inclined toward the right. Saliva constantly dribbled from his mouth and could be seen in streaks upon his clothing. The mouth appeared as a large transverse fissure, devoid of expression, and in marked contrast with the upper portion of the face, which showed numerous wrinkles. The tongue lay

passively on the floor of the mouth and could not be protruded. It was corrugated, somewhat atrophied and of a peculiar velvety feel. He was not able, with any amount of exertion, to touch his cheek with his tongue, but could barely lift it from the floor and place it above his lower teeth. For practical purposes, the tongue was motionless. The lips were rather thin and flabby and stood wide apart. A request to pout his lips as in kissing or whistling, elicited no response. Upon requesting him to say "Ah," the pillars of the fauces seemed inactive, but upon tickling his uvula there was some response, and a reflex obtained on tickling his fauces. A laryngoscopic examination discovered the vocal cord in the cadaveric position. The muscles of mastication appeared weak, the right sterno-mastoid atrophied and left almost entirely disappeared. The extensors sustained the entire weight of the head. The special senses were uninvolved, and there was no sensory disturbance of any kind. The deep reflexes of the upper and lower extremities were markedly exaggerated. Upon tapping the chin, a jaw clonus was elicited, which was better felt than seen. There was well-marked generalized atrophy of the upper extremities. The shoulder muscles were weak, and there was a cervicodorsal kyphosis. Unaided, the patient could not succeed in undressing himself. The thenar eminence of the left hand was markedly flattened, as well as the palm of that hand, while the right hand showed a similar atrophy in the hypothenar eminence. There was an extensive scar on the left hand, the result of an injury received several years ago, which he claimed to be responsible for the weakness of that hand. A dynamometer registered 60 in the left hand and but 20 in the right. Besides the sterno-mastoid muscles, the trapezii were atrophied in the upper portion; the deltoids, the biceps and triceps, the left supraspinatus, the right infraspinatus and the right pectoral were all more or less atrophied. The gait was about normal, but the left foot occasionally scraped the floor. Some stiffness in the left ankle joint was claimed to be the result of rheumatism, which would probably account for this scraping. The Babinski phenomenon could not be obtained, and no appreciable diminution of strength could be detected in the lower extremities. Fibrillary tremor in shoulder and arm muscles could occasionally be seen. There was no reaction of degeneration, but a decided quantitative reduction of both currents in tongue, lips and mastoid muscles. The pulse was 90 to the minute.

To summarize, Dr. Grinker said this was a slowly progressive bilateral affection of the motor nuclei in the medulla, involving principally the hypoglossal, spinal accessory, glossopharyngeal, lower facial and probably some portion of the trigeminus and vagus. He said that an interesting question arises as to whether this be the disease described by Duchenne as glossolabio-laryngeal paralysis, commonly called progressive bulbar palsy, as a distinct entity; or, was the symptom-complex, progressive bulbar palsy, but the beginning or end of some other disease. Progressive muscular atrophy, pseudobulbar palsy, apoplectic bulbar palsy and amyotrophic lateral sclerosis were to be considered. Against progressive muscular atrophy would be the presence of exaggerated reflexes everywhere, and the absence of the reaction of degeneration in the paretic muscles. Apoplectic bulbar palsy has a sudden onset and inclines toward a hemiplegic distribution. Pseudo-bulbar palsy might produce exaggerated reflexes and a picture resembling the case presented, but there was no history of two different attacks, and the bulbar palsy was complete, while in the pseudobulbar variety the palsy is never complete, and some disturbance of the intelligence is the rule. Pontine tumor could also be excluded on account of the absence of tumor symptoms. In amyotrophic lateral sclerosis there is involvement of both the central and peripheral neuron, either in the cord or in the medulla, or in both. Though it usually begins in the cervical cord and later extends upward, it may begin in the medulla and extend downward.

In the case presented there was masseter clonus, exaggerated reflexes and weakness of muscles in the upper extremities and shoulder girdle, the paretic muscles reacting to both currents fairly well. This would indicate that the central portion of the nuclear representation in the medulla must be involved in addition to the nuclei themselves, as well as the pyramidal tracts and their continuation in the anterior cornual cells. The diagnosis of amyotrophic lateral sclerosis with a bulbar beginning, appealed to Dr. Grinker as the most logical, although the amyotrophic lateral sclerosis was still in the developing stage.

Multiple Cerebral Gummata: Dr. James B. Robb showed sections of a brain containing multiple gummata, and reported the history of the case, saying that the patient, a laborer, had begun to show symptoms three weeks before death, and that his condition was attributed to a fall which had produced a slight scalp wound. Following the injury, the patient had complained of headache, talked irrationally, was unable to eat or sleep, was suspicious, imagined he was pursued, saw objects on the walls, talked to himself, walked unsteadily and vomited at times. The doctor said no history of previous illness nor of venereal infection was obtained.

Examination showed a heavily built, well developed young man, who walked to the hospital, but with an uncertain, staggering gait; excited and irrational, so that restraint was necessary. The temperature was subnormal, the pulse slow, 58, irregular in time and volume. Respirations were stertorus and irregular, approaching the Cheyne-Stokes type. The heart and lungs were normal. The abdomen showed no abnormalities, the liver and spleen not being palpable. There was a scar on the left side of the glans penis. No spasms or paralyses were observed in face or extremities. The cremasteric and plantar reflexes were obtained. The patellar reflexes were not obtained, probably on account of the difficulty arising from the patient being in constant motion. The posterior cervical and epitrochlear glands were not palpable.

No deviations nor nystagmus were observed in the eyes, but the right pupil was larger than the left. Examination of the fundus showed bilateral choked disc of extreme degree.

The patient sank into coma and died in less than 24 hours after entering the hospital. Permission to examine the chest and abdomen post mortem could not be obtained, but the brain was removed and revealed the following:

Marked congestion of all the vessels of the meninges; moderate dilation of the ventricles with a clear fluid. On the mesial surface of the left frontal lobe, 3 c.m. behind the frontal pole and 2-½ c.m. below the upper border, was a nodule measuring 1-½ c.m. along the mesial surface and 7 m.m. transversely. It is entirely in front of the corpus callosum, firm in consistency, of the same color as the white matter of the brain, apparently covered by pia, and everywhere displacing the cortex and separated from it. Eight c.m. in front of the left occipital pole on the inferior aspect of the lateral surface, was another globular subpial nodule, 1 c.m. in diameter, answering in all respects to a description of the first. Seven and a half c.m. in front of the occipital pole on section on its anterior aspect, 5 m.m. below the external surface, was a firm, grayish area, which extended 17 m.m. inwards and measured 13 m.m. from above downward. It was directly connected with the brain substance, but quite sharply circumscribed, and interrupts a sulcus which extends 5 m.m. inward from the inner portion of the nodule. The bottom of this sulcus was located 2 c.m. from the posterior horn of the lateral ventricle. This section was a vertical one made 7 m.m. behind the opening of the aqueduct of Sylvius into the 4th ventricle. Just below and external to this was a firm, globular subpial nodule 7 m.m. in diameter, resembling the first two above described. Sections before and behind that just described showed the greatest anterior posterior measurement of the largest tumor to be not more than 15 m.m. One section 7 c.m. behind the frontal pole, going through the anterior commisure, extending from the bottom of the Sylvian fissure upward and outward as far as the external capsule, showed a dark, grayish-white area, quite sharply outlined and soft, measuring 17 m.m. long and 4 m.m. broad, bordered above by the lenticular nucleus and below by the gray and white matter of the temporal lobe. Nothing was seen of this area 5 m.m. in front of or behind the section described.

Microscopic examination of the tumors showed typical syphilitic gummata with endarteritis and periarteritis of all the meningeal vessels adjacent to them. Several sections taken from various parts of the brain where no gross lesion existed, showed the presence of a universal endarteritis and periarteritis, both in meninges and cerebral cortex.

The case was of interest, **first,** on account of the classical symptom-complex of brain tumor, no one symptom except focal manifestations being absent; **second,** the pronounced character of the symptoms and the rapid course as contrasted with the insignificant gross lesions, which might have conceivably been overlooked had the history been absent at post mortem; **third,** the fact that the man died of a curable disease, the diagnosis made by the physician in charge having been delirium tremens.

At the meeting of the Southwestern Section held at Grace Cafe, 540 West 63d St., Dec. 6, 1904, the following papers were read:

Infiltration Anaesthesia in General Surgery.

R. M. Parker, M. D.: Generally speaking, an ideal local anaesthetic is one which, while completely abolishing pain, will not interfere with the operator, compelling neither modification nor restriction of his procedure, and one which will not retard the process of healing nor leave any unpleasant after effects, local or general.

Koller's presentation of cocaine as a local anaesthetic opened a new field for experimentation, with the result that now we have a local anaesthetic closely approaching the ideal. So popular has this anaesthetic become in the European countries that there "the question today is not which is the safer anaesthetic, chloroform or ether, but in what cases can local anaesthesia be substituted for anaesthesia by inhalation." Schleich, the chief pioneer in local anaesthesia, claims that it suffices in performing 90% of all surgical operations. Matas, one of the few American surgeons who have adopted local anaesthesia extensively, makes the more conservative estimate of 50% to 60%.

There are three varieties of local anaesthesia: (1) The direct, secured by applying the anaesthetizing medium directly to the surface to be cut, e. g., the ethyl chloride spray to the skin or cocaine solution to the mucous membrane.

(2) Infiltration anaesthesia, which is produced by injecting a solution of the analgesic into the structures to be cut.

(3) Regional anaesthesia, caused by injecting the cocaine solution into or around the nerve trunks which supply sensory fibers to the field of operation. At the point of injection all stimuli traveling in the nerve toward the center are blocked, so that the area supplied by these nerves, distal to their points of injection, is anaesthetic.

Of the three methods of local anaesthesia the infiltration method has by far the broadest field of usefulness in general surgery. The other methods are, in certain operations, advantageously combined with infiltration anaesthesia.

The success of the infiltration method has been largely due to the discovery by Schleich that very weak solutions of cocaine when injected into the tissues by means of a hypodermic needle are capable of producing total anaesthesia of the structures thus infiltrated. As the result of his investigation Schleich was able to commend for infiltration anaesthesia

three solutions represented by the following formulae:

	Strong. 1	Med. 2	Weak. 3
Cocaine Muriat.	.2	.1	.01
Morph. Muriat.	.025	.025	.005
Sod. Chlor.	.2	.2	.2
Aquae Dist.	100.	100.	100.

He advised the strong solution for inflamed and other hyperesthetic tissues and the weakest where a large quantity of the fluid was to be used. In this way he calculated to make infiltration anaesthesia safe from cocaine poisoning.

The largest amount of cocaine which can be safely injected at one sitting has been given by conservative authorities as gr. ¼. Assuming gr. ¼ as the maximum dose, it will be seen that we are limited to the use of ℥ii of the strong solution, ℥iv of the medium, and ℥iv of the weak. I have, however, seen these quantities exceeded many times without evil results. In one operation, a circumcision, in which from ℥ii to ℥iii of the strong solution representing gr. I to gr. iss of cocaine, were injected, the patient developed alarming symptoms. He recovered, however. The danger from cocaine poisoning in operating with infiltration anaesthesia has been greatly diminished by the use of various means to retard the circulation in the field of operation. The Esmarch constrictor, where its application was permissible, has served the purpose well. The ice bag has done the work, less perfectly, however. Better than either is the suprarenal extract, which is an ingredient of most of the infiltration fluids now in use. When injected into the tissues this drug produces, after five or ten minutes, an ischemia extending one-half to one inch beyond the infiltrated area. So nearly bloodless become the tissues that incision and dissection will be accompanied by scarcely any hemorrhage. This action of suprarenal extract insures safety from cocaine poisoning in several ways. Instead of being rapidly carried away by the circulation the infiltrated fluid remains for a long time where it is injected. Part of it escapes through the operating wound, while the remainder is so gradually absorbed that the system is unlikely to be overwhelmed by the drug.

It has also been suggested that the cocaine, while harbored by the tissue cells, has in part been rendered inert by the latter before its absorption into the circulation. Furthermore, the extract of the suprarenal bodies is a heart stimulant and hence a physiological antidote for cocaine poisoning. The power of the suprarenal extract of mitigating the poisonous action of cocaine in infiltration anaesthesia is well demonstrated by the experiments of Butler, who injected guinea pigs with eight to fifteen times the toxic dose of cocaine in a solution with adrenalin, without observing even serious symptoms.

Not only does suprarenal extract guard the system directly from cocaine poisoning, but indirectly it makes the accident less likely by reducing the amount of infiltration fluid required for prolonged operations. As one would expect from its local action, suprarenal extract maintains the anaesthesia of the solution with which it is administered, for a long time. The effect of the original Schleich solution lasts but twenty to thirty minutes. With the addition of suprarenal extract the parts remain anaesthetic for at least 1½ hours, hence, reinfiltration is not required even in the longer operations.

The suprarenal extract should be added to the infiltration fluid in the proportion of one to twenty or thirty thousand. In some cases a dilution of one to forty or fifty thousand suffices, while in others nothing weaker than one to forty or fifty thousand will be effective.

Although adrenalin is said to be harmless, I shall exercise caution in the use of the stronger solutions since observing its effect upon myself. After injecting less than ℥i of a one to five thousand solution, I experienced an unsteadiness in the use of my hands. I was soon seized with a feeling of faintness and anxiety accompanied by nausea, palpitation of the heart, and pain in the abdomen, and was obliged to lie down. The whole surface of the body became quite pale. The pulse was rapid, small and irregular. In about ten minutes the effect had passed so that I could resume my work.

Another modification of the Schleich solution calculated to contribute to its safety is the substitution of eucaine for cocaine. It is said to be three and three-fourths times less toxic than cocaine. In one of my experiments on a colleague I injected between 2½ and 3 grains of eucaine without observing any systemic symptoms. In my experiments eucaine appeared to be just as effective as cocaine though it proved to be more irritating than the latter. More burning and smarting and more edema resulted as after effects.

The safety of infiltration anaesthesia can be still farther advanced by using the weakest cocaine or eucaine solution which proves effective. There is a wide difference of opinion in the profession as to the amount of analgesic necessary to make an infiltration fluid effective. Schleich and many others believe that the anaesthetic effect of his solution is due more to their physical action than to the paralysis of the sensory nerve endings caused by the cocaine. Schleich claims that a .2% salt solution is all that is needed for infiltration anaesthesia, but that a small percentage of cocaine is advisable in operating upon hypersensitive pathological tissues. In the experience of others, however, a small amount of cocaine has been indispensable to a satisfactory infiltration fluid.

To satisfy myself on this point I carried out a series of experiments in which I injected solutions of salt, eucaine, cocaine and water of different proportions into the skin on the anterior surface of my thighs. I used, to test the sensation of the skin, four ordinary sewing needles loaded with one to four split buckshot. These needles are designated one, two, three and four, in accordance with the number of shot each carries. Each needle was provided with a piece of thread six or eight inches long, passed through the eye for convenience in handling.

Testing the normal skin, I found it painfully sensitive in a slight degree after allowing the point of needle No. 1 to rest on it from two to five seconds. With No. 2 the pain was slight but prompt; with No. 3, moderate, and with No. 4 quite severe.

A .2% salt solution was first injected. It caused a small degree of smarting which amounted to acute pain when the solution was rapidly injected. The infiltrated area was not sensiltve to needle No. 1, but pain was caused by 2, 3, and 4, but much less than on the normal skin. The injection of a normal salt solution was painless if done slowly. Though the infiltrated area was quite numb, each of the four needles produced some pain. Concentrated salt solutions, 2% or 3%, caused severe pain which lasted fully ten minutes. The degree of numbness which followed was about the same as that seen with normal salt solution. Severe pain followed the injection of distilled water into the skin and continued for about two minutes, when the skin was found to be absolutely anaesthetic and continued in this condition for twenty minutes.

This series of experiments, most of which I have repeated many times, has satisfied me that an analgesic drug is essential to a satisfactory infiltration fluid. It will be noted that distilled water was the only fluid capable of producing absolute anaesthesia but its injection is too painful to be practicable. These experiments also illustrate the fact that fluids, to permit of painless injection, must be isotonic with the fluids of the tissues into which they are injected, i. e., they must have the same specific gravity and the same freezing point as the tissue fluids, otherwise osmosis occurs leading to engorgement or depletion of the cells, in either case causing pain.

The injection of solutions containing .1% cocaine was followed by prompt and complete anaesthesia over the whole infiltrated area. It persisted for twenty to thirty minutes. I could see no advantage in stronger solutions. With solutions of cocaine weaker than .1% the infiltrated area was anaesthetic at some points but sensitive to pain at others and the anaesthesia was of short duration, ten minutes or less. Whether the infiltration fluid consisted of cocaine in distilled water or in normal salt solution made no difference in the promptness or the degree of anaesthesia, but following the use of all the solutions in which distilled water alone was used as a menstruum for the cocaine, there was considerable burning and smarting with the return of sensation. The weaker solutions of cocaine in distilled water caused more or less pain when injected, while the solutions containing .6% of salt were painless when injected slowly. The results were the same when eucaine was substituted for cocaine. From these experiments it appears that infiltration fluids, to be practicable anaesthetics, must contain about .1% cocaine or eucaine and .5% salt.

The solution which I have found most satisfactory for general use, and one which is in accordance with the above experiments, is composed of:

Cocaine Hydrochlorate or Eucaine.....	.1
Sodii Chlorid.	.6
Suprarenal Extract (1-1000) .....5 to	10.
Aquae dist. q. s. ad	100.

It is best to make the fluid at the time it is needed as the suprarenal extract is quite unstable, becoming inert after a few days. Cocaine is also destroyed in time but eucaine will keep indefinitely. The salt, cocaine, and eucaine can be purchased in the form of compressed tablets which are convenient for making an accurate solution. The extract of suprarenals is obtainable in solution of one to one thousand. It should be kept tightly corked in its original bottle and opened as seldom as possible, for it tends to degenerate when exposed to the air a few times. It is also sold in compressed tablet form, though I have had no experience with this preparation.

In making the solution the desired tablets are first added to distilled water in the proper proportions. The solution is then boiled until it is sterile. The loss by evaporation must be made up by adding sterile water. Eucaine withstands boiling indefinitely and cocaine is more resistant to heat than has been generally supposed. I boiled a .1% solution for thirty minutes without apparently injuring its potency in the least. The suprarenal extract should be added after the fluid is cool. It imparts a delicate pink color to the solution after a few hours but this does not indicate that the fluid has spoiled.

The above formula represents a safe and efficient solution for infiltration anaesthesia and while 60 c.c. of this solution will suffice for the large majority of operations, I believe that the entire 100 c.c. can be safely used at one sitting even though cocaine is the analgesic ingredient.

However nearly perfect an infiltration fluid may be, its successful use demands considerable experience in the method of its administration. Faulty technique, I believe, has been responsible for the failure of many surgeons to appreciate fully the possibilities of local anaesthesia in general surgery.

The first requisite to a satisfactory infiltration is the proper syringe. A strong one of large size, holding at least 3ii, should be selected. As infiltration takes place under more or less pressure, a syringe with perfectly fitting parts is essential, so that there will be no leakage about the piston or joints. Personally I prefer the solid steel syringe. The needle should be long and of small calibre. Its point should have a short bevel. An apparatus resembling the Potain aspirator has been devised for convenience in injecting large quantities of fluid, but it is not necessary.

The patient should be prepared according to the requirements of the operation. A preliminary hypodermic of morphine given twenty or thirty minutes before the operation is desirable for nervous individuals. The patient is placed in the position most comfortable to himself and the surgeon. A drop of carbolic acid or the ethyl chloride spray on the site selected for the first

insertion of the needle has been advised, but is not often necessary as the pain is usually too slight to be complained of by the most sensitive patient. The needle point is first introduced into—not beneath the skin. Its insertion needs to be only far enough to cover the bevel on the point when a drop or two of finid is injected. This is followed by a pale wheal which is totally anaesthetic. The tactile and the temperature senses are abolished as well as the sense of pain. Infiltration is now painlessly continued along the line of prospective incision as far as the needle will reach. The needle may also be directed into the deeper tissues if their infiltration is desired. It is then withdrawn and reinserted just within the farther margin of the anaesthetic wheal and the line of infiltration is exended as before until the required length is reached. The incision may immediatedly follow, as anaesthesia is complete as soon as the tissue is infiltrated. All the tissues to be cut or dissected must be tightly infiltrated becauese the anaesthesia does not extend beyond the limits of infiltration. As soon as the least pain is complained of, the knife should be laid aside and the syringe resumed until the infiltrated area is sufficiently extensive. Economy and effectiveness can be learned by practice only.

Special features must be added to the method described to meet the requirements of the particular operation in hand, and the other methods of local anaesthesia may be profitably used as auxillaries to the infiltration method in certain cases, for example, in herniotomy, regional as well as infiltration anaesthesia may be called to our assistance, for the nerves supplying the field of operation are quite superficial. The same can be said of operations on the chest wall. In circumcision direct anaesthesia may be combined with infiltration, a 5% solution of cocaine is applied to the mucous membrane of the prepuce while the skin and deeper structures are anaesthetized by infiltration.

The technique of treating infected areas deserves special mention for one frequently fails here in the use of local anaesthesia on account of the hyperthesia of the tissues. Infiltration should take place very slowly, lest great pain be caused by pressure transmitted to adjacent unanaesthetized tissue. The knife with which the tissue is cut should be very sharp so that a light stroke will do the work with little pressure on underlying structures. Sometimes the tissues are so honey-combed by infection that infiltration is impossible. If an abscess is opened the contents should be removed and the cavity packed with a strip of gauze impregnated with a 5% solution. After a few minutes it may be removed when the walls can be satisfactorily curetted by lightly scraping with a sharp spoon.

In the hemorrhoid operations, the skin around the margin of the anus is first infiltrated. The needle is then passed upward closely outside of the rectum and the sphincters and all the perirectal tissues are thoroughly infiltrated. It will now be found possible to dilate the sphincters in the usual way without causing pain. The mucous membrane can also be treated by direct anaesthesia if it is desired, but it is not often necessary. As each hemorrhoid is selected for removal, the needle is inserted at its base and the tumor is tightly infiltrated. It can now be removed by clamp and cautery, ligation or excision as the operator desires.

In skin grafting the area to be covered is first infiltrated if it is to be curetted. Then the area from which the grafts are to be taken is anaesthetized in the same way. The operation can then be carried out as it is with general anaesthesia. In a case which I operated on with Dr. Fowler, this method was used. Though the condition of the wound and the subsequent conduct of the patient were very unfavorable to healing, a large percentage of the grafts took, and the infiltration did not appear in the least to have damaged the grafts.

The technique of anaesthetizing in the many other minor operations which may be done with the aid of the infiltration method can not receive attention here.

In my work with infiltration anaesthesia I do not confine its use to those cases in which general anaesthesia would otherwise be used, but I employ it to relieve my patients of the small amount of pain in those slight operations which are usually done without any anaesthetic. The aspiration of the chest, for example, and the tapping of an ascites are rendered painless by first infiltrating the course of the needle or trochar. I have also used this method in about twenty-five vaccinations. Many patients submitting to re-vaccination have expressed their gratification at being spared the usual amount of pain, small though it is. Babies and children can be vaccinated with aid of the local anaesthetic without apparently realizing that anything unusual is happening. All the infiltration necessary for this purpose is enough fluid in the skin to raise a wheal the size of a navy bean.

Many of the major operations as well as the minor surgery can be done with local anaesthesia alone. It is especially indicated in such operations as prostatectomy and operations for exophthalmic goitre, in which the patients are usually poor subjects for anaesthesia by inhalation. Operations on bone can be carried out successfully, and even amputations of the extremities have been done with local anaesthesia alone. In such operations it is advisable first to expose the large nerve trunks of the extremity and block them by injecting within their sheathes a 2% or 3% cocaine solution. It is not sufficient simply to pass the needle through overlying structures and surround these nerves with the solution, as incomplete anaesthesia only can be thus obtained. Such a procedure will block the smaller nerves, like the intercostals, very effectually as is shown by the following experiment: A 2% eucaine solution was injected around the 5th, 6th and 7th intercostal nerves in the anterior axillary line. The needle was entered over the 6th rib and the corresponding nerve surrounded. It was then partially withdrawn until its point cleared the muscular fascia when needle and skin could be

shoved up to the 5th and down to the 7th intercostal nerves, which were treated like the 6th. At the end of ten minutes there was present a triangular area of absolute anaesthesia. Its base, in front and parallel with the anterior axillary line, reached from the under border of the 5th to the lower border of the 7th rib. Its apex rested at the lateral border of the sternum. This area, evidently, received inervation from the 5th, 6th and 7th intercostals only. Immediately above and below were areas of relative anaesthesia. In the area of absolute anaesthesia all the soft parts covering the ribs were insensitive to pain when perforated by a needle, but sharp pain was complained of when the periosteum was touched.

In laparotomy infiltration anaesthesia finds a broad field of usefulness although it has its limitations. Many abdominal operations can be executed from beginning to end with no other anaesthesia. In other cases the infiltration method must be supplemented by general anaesthesia. The separation of peritoneal adhesions usually demands anaesthesia by inhalation.

Certain structures in the abdomen are quite sensitive, others are not. The parietal peritoneum is always painful to incision or other operative measures, but the omentum may be ligated, divided, cauterized, or otherwise treated, provided it is not pulled upon. The intestines are not sensitive to pain unless their mesentery is forcibly stretched. Removal of the vermiform appendix is painless, and operations on the surface of the uterus are not complained of provided the ligaments are not made tense. In a general way it may be said that all pain felt within the abdomen during operation or disease is to be referred to those parts which are inervated by the intercostal, lumbar, or sacral nerves.

The painful structures contained in the abdomen give to local anaesthesia limitations rather than contra-indications. While local anaesthesia is especially desirable in cases of grave organic disease in which general anaesthesia is especially dangerous, it can be used in all operations up to a certain stage, thereby shortening the period of general anaesthesia and reducing to a minimum the danger of complications incident to chloroform and ether. The change from local anaesthesia to general is made practicable by the use of gas as a preliminary to ether and chloroform, as the loss of time is thereby obviated.

The absolute contra-indications to infiltration anaesthesia are as follows:

(1) Insurmountable fear on part of the patient. Even the most nervous patients can usually be quieted by assurance, however, and their confidence is soon gained after the operation is once under way and they find that they suffer no pain.

(2) Where muscular relaxation is required.

(3) In plastic operations where infiltration would destroy relations.

Among the objections which have been urged against the infiltration method are the following:

(1) Danger of cocaine poisoning. Since the introduction of suprarenal extract and eucaine this objection no longer holds.

(2) Sloughing of the tissues following its use. Many cases have been reported by dentists. To what extent infection of the wound is responsible for the sloughing is an unsettled question. I have observed two cases but I cannot justly attribute them to action of the solution. One was a circumcision done on a subject suffering from chancroids; the other was the removal of a large callus resulting from pressure of an artificial limb. The surrounding tissue was of low vascularity. Infection occurred. It cannot be denied that there is danger of carrying infection from the skin into deeper tissues with the infiltrating needle.

(3) Secondary hemorrhage. This is due to a temporary constriction of the arteries in the field of operation, caused by the cocaine. During the operation no hemorrhage occurs but a paresis of the vessel wall soon follows when hemorrhage begins. I had this accident in a circumcision. The bleeding was from the dorsal artery of the penis. With eucaine or when suprarenal extract was used coordinately with cocaine, I have not seen this complication.

These objections are certainly more than offset by the advantages of infiltration anaesthesia, which are:

(1) Removal of danger of death on the table.

(2) Avoidance of the after effects of general anaesthesia on heart, liver, kidneys and lungs. Be it said, however, that according to statistics pneumonia occurs as frequently after one anaesthesia as the other.

(3) Absence of nausea, vomiting, and unconsciousness.

(4) Impossibility of drowning by fecal vomit.

(5) The patient is conscious and can be of assistance to the surgeon.

(6) The consent of the patient to the operation is more easily obtained.

(7) The anaesthetic is more agreeable.

(8) A part or all of the assistants may be dispensed with.

Local Anaesthesia and Anaesthetics Outside of the Infiltration Method.

Dr. Ransmeier: Before I begin my paper proper I wish to state that I have tried to make it as short as was consistent with common sense and have tried to keep from the field covered by Dr. Parker's paper as much as possible.

I am indebted very much for material obtained from various standard works, especially to that of Heinrick Hare and others.

This is a subject which interests every live practitioner, whether he is a surgeon specialist or not.

Though the agents consistently and continually used are limited in number and these are not always satisfactory, still the benefit derived

from their use is very great. You cannot appreciate the gratitude felt for the help derived from the use of these agents till you have been surgeon and patient.

At the outset I wish to say that I intend to deal especially with local anaesthetics, proper, not local anodynes, the latter being of use where pain is already present, not anaesthetics properly speaking.

A local anaesthetic is employed to abolish the sensibility, by topical application for periods varying from a few seconds to perhaps a few hours.

As examples of local anaesthetics, we have cocaine, carbolic acid and extreme cold.

As examples of local anodynes, we have aconite, carbolic acid, chloral, menthol, veratrine, etc. A local anaesthetic not only serves the operator but also the therapeutist and the diagnostician.

From time to time some zealous worker brings to our attention some new agent, which he has brought from the land of the unknown but because of properties lacking (or present) many of these are accepted by only a few, and in time are very often abandoned by most of these and even by the discoverer himself.

To be satisfactory a local anaesthetic for operations should:

(1) Abolish the sensibility of a part thoroughly.

(2) Should not effect the field of operation sufficiently to interfere with well laid plans of operation.

(3) Should be fairly free from dangerous or even unpleasant effects before, during and after an operation.

(4) Should not retard the healing of wounds, or hurt the general health of the patient.

In regard to the choice of a local or general anaesthetic:

It may be preferable to use a local anaesthetic:

(1) To save time before, during and after an operation.

(2) If you can properly perform an operation with it, in short operation, in simple operation, in operations well known, e. g., minor operation, such as:

(a) Tracheotomy, for laryngeal diphtheria. Here chloroform would be bad as causing additional prostration. Some use it even in strangulated hernia operations.

(3) To save assistants, where necessary, where it is impossible to get a good anaesthetizer or any one, or to pay one.

(4) It may save some added responsibility due to giving a general anaesthetic.

(5) To avoid unpleasant after effects, e. g., headache, retching, vomiting, especially bad in operation about mouth, eyes, face, throat, abdominal wall.

(6) To avoid dangers to kidneys and lungs, paralysis, etc.

(7) To avoid shock, which is often due to a general anaesthetic.

(8) To avoid fear of being put to sleep, that of helping to gain permission to an early operation and thus prevent pathologic processes from taking place.

(9) In operations about face, etc., to prevent assistants from interfering with operator.

(10) To allow coughing and thus preventing deglutition and aspiration of blood, etc.

(11) To have general cooperation of patient allowing him to cough, turn eyes or head, expectorate, move members after tenotomies for tests, etc.

Use a general anaesthetic:

(1) If patient has horror of sight of instruments and blood, or if he prefers to be asleep, if there is necessity for exposure.

(2) If patient asks for a general anaesthetic.

(3) If patient is hysterical.

(4) If consciousness may lead to shock or great fright.

(5) If uncertain how much ground your operation will cover.

(6) If complete muscular relaxation is necessary.

(7) If the pain due to application of a local anaesthetic is too severe before, during or after the operation.

(8) If the application of a local anaesthetic interferes with the field of operation impairing vitality of tissues, etc.

(9) If operation is prolonged, or if field is extensive.

I wish to give a brief outline or plan of my paper here. The agents which I have taken up are:

Of cocaine, I shall consider:

(1) Cocaine.

(1) Properties, in ophthalmology, laryngology and rhinology, otology, genito-urinary surgery, general surgery.

(2) As an aid to diagnosis.

(3) As a therapeutic agent.

(4) Methods of use.

(5) Accidents and their remedies.

(2) Tropa-cocaine hydrochloride.

(3) Holocain.

(4) Orthoform.

(5) Refrigeration.

(6) Eucaine, H. & B.

(7) Nirvanine.

(8) Aneson.

(9) Liquid air.

(10) Chloretone.

(11) Guiacol.

(12) Carbolic acid.

(13) Antipyrin.

I will not spend much time upon those agents which are as yet not satisfactory, as I believe we can derive a greater benefit from a study of those which we know are reliable.

Let us briefly consider **Aneson:**

Aneson is a trade name for acetone chloroform, while it has sufficient anaesthetic power for some operations it is not used extensively.

It is used some in ophthalmology, where it is proper to state that it does not effect the iris, nor cause irritation of eye or after pain.

It is also used in nasal, laryngeal, dental and minor general surgery in 1 or 2% solutions.

Sternberge says, It is nontoxic, non irritant and anaesthetizes quicker than cocaine.

Liquid Air recommended by Campbell for purposes of local anaesthesia, as well as for a cauterizing agent in certain local conditions. The reaction from freezing takes place in about 10 minutes and is attended by hyperemia. A spray of liquid air gives relief in intestinal, trifacial and sciatic neuralgias.

Patton states that you can abort boils, carbuncles and buboes in their early stages, if you thoroughly freeze them and specific, chancroidal and varicole ulcers heal promptly if treated twice a week by freezing.

Chloretone given in 10 to 20 grain doses or used in solution. Closely allied to chloral, yet does not depress heart or respiration in moderate doses, nor does it irritate the stomach which makes it useful for sedative purposes in gastric carcinoma and in vomiting, due to irritation. Personally I have used it repeatedly for anaesthetic purposes upon mucous membrane of nose and throat, but have had little satisfaction from its use.

However, I have noted that certain men who are authorities say it is well to combine it with cocaine, claiming that less cocaine is needed and thus proving an advantage.

Tropo Cocaine Hydrochloride, an alkaloid obtained from the small leaved Java Coca plant. Readily soluble in water.

Ferninande and Chadbourne say that a 2 or 3% solution produces a quicker, more reliable and less toxic anaesthesia than cocaine.

Antipyrin. Very soluble in water. It is valuable to produce anaesthesia locally in bladder irritations, tending to depress the sensory nerves and centers of reception of the cord. Therefore in medicinal amounts a nervous sedative. If you apply it to mucous membranes or inject it beneath the skin, it has a powerful local anaesthetic effect. This may last some days. Its field of usefulness lies in therapeutics, mostly however.

In suppository it may be employed to relieve rectal pain. It is of service also when incorporated in dusting powders, for painful ulcers and like conditions.

Carbolic Acid. Care must be used in the use of this agent. Though its effects locally are only superficial, for the coagulation of albumen it can't penetrate very deeply. Depressing sensory nerves, it may be employed in 1 or 2 drop doses for nervous vomiting and gastric irritation. 1 part to 100 of water, relieves an inflammation of an ulcerated sore throat, may be gargled or applied by means of a swab. For burns, it makes a good dressing when combined with sweet oil, 1 in 50. For itching due to jaundice it may also be combined with sweet oil and used with advantage, 10 gr. to 3iv of the oil. It is also applied in the form of an ointment in subacute eczema.

Guiacol, contains 60 to 90% creosote, and is not very satisfactory. Its application at first smarts and pains and may cause a slough of tissue. It has caused general depression. Anesthesia is not very lasting. It is sometimes painted over neuralgic areas and has been injected into painful deep seated nerves.

Nirvanine occurs in white crystals, very soluble in water about 1-10 as toxic as cocaine. Has little effect on heart and respiration, hence it is a valuable agent for use about places where you cannot control the circulation easily, e. g., about rectum. It is a staple compound and can be boiled without injury. As it is irritating to the conjunctiva it is not so valuable in eye work though its anesthesia is fairly prompt and lasting. It has no effect on the unbroken skin. If deep anaesthesia, even on mucous membrane operations, is desired, don't use it as it is not satisfactory. It is best adapted for subcutaneous and infiltration work. Oft employed by dentists previous to extractions.

Holocaine. The hydrochloride is generally employed in 1 or 2% solution. It is slightly soluble in cold water. It may be boiled. Heinick's work states that it should be kept in a porcelain vessel, for if placed in a glass vessel, containing an alkali in its makeup it will extract the alkali and become cloudy. Renew your solution after a couple of months. It is best not to use it subcutaneously but to limit its use to mucous membrane. When there is not much danger attending. It is several times more toxic than cocaine. It may be employed and still get results on normal, hyperemic and granular conjunctivas. It's action is rapid. Not effecting, cauterizations it may well be employed. Wounds turbing intraocular tensions it is valuable for use as an anaesthetic upon glaucomatous eyes. It does not contract the blood vessels and while it may therefore be the cause of obscuring your field, it washes out the field. It does not dry the epithelium of the cornea, nor hinder lachrymation. For the pain of corneal ulcerations, or cauterizations it may well be employed. Wounds have a better chance to heal well after its use than if an anaesthetic were employed that shut off the circulation.

Orthoform. A colorless, odorless powder, only slightly soluble in water, hence not adapted for hypodermic use. It can be suspended in oil. It is mostly employed in a therapeutic manner. If applied too thickly and too long on weakened skin, it may cause an eczematous rash. This may happen on the skin about an ulcer upon which orthoform is used. This complication may be avoided, by covering this area with a simple ointment. It has no action upon the unbroken healthy skin or even upon healthy mucous membranes.

It seems necessary to bring it into immediate contact with the terminal sensory nerve fibres. It is therefore useful in painful ulcerations and it can be advantageously combined with such agents as iodoform, aristol, calomel, boric acid, etc. The anaesthesia may last for hours or even days. You may employ it in solution in alcohol or collodion or in a 10 to 20% lanoline ointment.

(1) It has a soothing effect upon wounds produced by operations for adenoids, tonsils, cauterizations, etc.

(2) It is valuable for pain and difficulty of swallowing in cancer and tuberculosis of larynx and tongue, 5 gr. is enough to insufflate.

(3) Used on specific and chancroidal ulcers after cauterization. If there is much exudation, employ an ointment.

(4) Valuable in suppository for rectal ulceration and irritation.

(5) Also used for varicose ulcers.

(6) Internally you may employ it for cystic irrigations and for gastralgias you can give it in doses of from 7 to 10 grains.

(7) It is an excellent drug to add to dressings for burns, even if deep.

(8) The pain of bed sores, circumcisions, painful hemorrhoids and anal fissures, corneal ulcers, fissured nipples, cauterizations are benefited thereby, as it can be used with little danger, it is a very valuable remedy.

Heinricke says, two ounces a week were used on a cancer with no bad effects.

Anaesthesia by refrig., viz.: Ethyl. chloride, cold, ice, ice water, ice and salt. Evap., rhigoline, ether, etc.

Ethyl. Chloride. Most commonly employed. Comes in small glass cylinders, compressed into a liquid form. When held in the hand, the heat derived from the body expands it and forces the ethyl chloride through a capillary opening in the form of a gas which is directed upon the part for anaesthetization. Hold your tube 8 or 10 inches from your field, as it assumes a parchment appearance, it may then be incised. The anaesthesia lasts 2 or 3 minutes. I personally have found little satisfaction in its employment for various reasons. However, many favor its use. Its anesthesia is superficial and fleeting. It is expensive. You usually freeze a greater area than necessary. If you over freeze, the health of the tissues is impaired and the wounds will heal more slowly. Sloughing may even ensue. Its use is attended with pain. You should not employ it near a flame. It changes the aspect of your field. Because of the hardness of tissues caused by the freezing, your cutting instruments must be very sharp as any added pressure causes pain.

Some of the same objections may be offered to the use of ice or ice and salt.

Ice water injections in skin or in places like the rectum have been employed with some satisfaction.

Sprays of chloroform, ether, menthol variously combined, have also been used as local anesthetics. The effect lasts about 5 minutes. Don't use near eyes!

Eucaine A—$C^{19}\ H^{27}\ NO^4$

Eucaine B—$C^{19}\ H^{21}\ NO^2\ HCl$.

Eucaine A (alpha) has been used as a local anaesthetic but is now generally discarded, because of toxic properties, similar to strychnine.

Used in ophthalmology, it caused considerable burning. In nose and throat work 5 or 10% were used.

Eucaine B (beta) less irritating and less toxic. Introduced in '97. It is a very good anaesthetic, being less toxic than cocaine (though not free from toxic properties). This can be used in larger amounts. It is a colorless, crystalline powder quite soluble in water. Not decomposed by boiling. A valuable feature. It causes some irritation, especially in injections. It is very stable and can be kept a long while. It is well adapted for use on the eye, nose, throat, urethra, rectum, etc. Its anaesthesia is more rapid than cocaine, though not so lasting. Used in nose and throat in 4 to 5%. Used in laryngeal tuberculosis 5%. Used in ophthalmic work 2 or 3%. Used in general surgery 2 to 5%. It is well employed in genito-urinary surgery, because you can inject fairly large amounts, as much as 3i or 3iss of a 3% solution has been employed with no evil results. It is satisfactory for circumcisions, operations on buboes, hydroceles, passage of urethral sounds, catheters, cystoscopes, etc. If you desire to overcome local engorgement it is a good agent.

The last agent I wish to speak about is cocaine, the most commonly employed local anaesthetic agent of our day. The hydrochlorate is the favorite salt used. While death has been attributed because of its over use the same may be said of other agents and this will not cause us to abandon it in properly indicated places and in proper amounts. Because of its powerfully toxic properties it must be employed with caution. It is well to ascertain in every proposed operation where you desire to employ it, if there is any contraindication in the heart, brain, kidneys and lungs of the patient. If there is, probably some other local anaesthetic may be employed just as well.

We all know that it is an admirable anaesthetic for all kinds of mucous membranes be they those of the mouth, throat, nose, stomach, intestines, eye, labia, vagina, bladder or womb. The powder may be dusted on a part, or as is more customary, a solution may be swabbed upon, or injected into the part you desire to anaesthetize.

It paralyzes the terminations of the periph. sensory nerves, and the less vascular the part the greater its action.

It is employed in strengths averaging from 1 to 3%, though 20% is sometimes used.

It can, of course, be sprayed and while this method is employed by many surgeons of unquestioned ability and knowledge, still it is only proper to warn those who have not had much experience in its use, to use extreme caution if employed in sprays, especially in the nose. In fact when possible, and it usually is, you had better apply it with swabs or pledgets.

In operations necessitating the section of the skin, it is not sufficient to apply it to the intact skin, but to anaesthetize the skin it must be injected into the skin itself, that is, it must be used endermically.

In General Surgery it is employed for all sorts of minor operations. If the skin is to be cut, inject the skin itself, along the line of proposed incision, making probably only 1 skin fracture, but changing the angle and direction of the needle. If necessary, then inject the subcutaneous tissues. It is employed in operations for the removal of small cysts, birth-marks, ulcers, tumors, ganglia. For tapping hydroceles, drainage of the abdomen and thoracic cavities, also for work on ischio rectal, perineal and other abscesses. Tracheotomies, tenotomies and many other similar operations may be performed, without pain to the patient.

In Ophthalmology, we find a great field for its use, as cocaine is not so irritating as many

other local anaesthetics possible here. It is generally employed in solution from 2 to 5% strength. Though this may vary from 1 to even 20%, where perhaps you may need it in enucleations, especially for the tissues surrounding the optic and ciliary nerves. According to White a 20% solution is sufficiently strong to allow cauterization of the corneal ulcer.

The removal of foreign bodies from the conjunctiva of cornea, iridectomies, cataract operations, enucleations, canal operations, removal of cysts, pterygia, etc., are all readily accomplished without pain by employing this valuable servant. A solution in passing through the cornea, may be carried to the aqueous humor and you can perform an iridectomy painlessly, if you wait 15 or 20 minutes for your anaesthesia to take place.

In general anaesthesia your patient may vomit, and this might result in a rapid discharge of the aqueous humor in operation for cataract. A prolapse of the iris and hemorrhages in eye ball might result. This might interfere with the vitreous and lens.

If a local anaesthetic agent is employed, your patient may aid you by changing the position of the eye ball if necessary.

Though the ophthalmologist is highly favored by cocaine the laryngologist and rhinologist is no less so. In his work, cocaine fills a very useful place.

As a conscious patient can cough, what an aid this alone is, to prevent asphyxia resulting from blood accumulation in the trachea and bronchi.

I again desire to denounce the spraying of cocaine, especially by the novice. You spray a greater area than necessary and therefore you intrude into the body organism toxic principles, which are unjustified, may cause much trouble and may result in death.

In this work, be clean as elsewhere. Clear your field with suitable sprays or swabs of mucous, saliva, crusts and other matters. Their presence diffuses your agent, retards its action and hinders their observation.

In tonsillotomies one or two thorough swabbings of a 5 to 10% solution to the mucous membrane over the proposed line of incision is all that is usually necessary, as the mucosa is the part that is most painful. However, some operators inject 1 and 2% solutions below the mucosa. 1 and 2% solutions are sufficient preparatory to cauterization of small veins, follicles, etc., the 5% is sometimes necessary for deep cauterization. You can shrink intumescent structures and thereby see objects posterior to a greater advantage, catheters and other instruments are more easily introduced and the wounding of tissues is often avoided. In some cases, you may by this aid, catheterize a eustachean tube that you could not otherwise perform.

In anaesthetizing the turbinated bodies, if you use pledgets, you should use enough of the solution to moisten them thoroughly, though not excessively and thus allow dripping. A good way is to moisten your plug, introduce it and instil your solution by means of a medicine dropper a few drops at a time upon a protruding end. Your pledget must be in contact with your surface. Swabbing is well adapted also for this work. Before anaesthetizing always get a good idea of the conditions and appearance of your field first, cocaine may shrink intumescent structures and give you a false opinion, especially true in intumescent turbinates, and polypi., may be caused to disappear temporarily.

Use cocaine cautiously in the nose. In this kind of work the nasal cases cause most trouble, as absorption is rapid.

The addition of adrenal solution to your cocaine solution renders your operation more nearly free from blood.

In Otology. Heinick states that cocaine can be well employed:

(1) For small operations upon walls of auditory canal, or on auricle, e. g., abscesses, removal of small tumors, etc.

(2) It is also valuable to apply previous to painful applications, nitrate of silver, acids, etc.

(3) For scraping, ecrasement, torsion, etc., in the tympanic cavity it is a valuable agent.

(4) It is well adapted for anaesthesia in paracentisis of the tympanum.

(5) It is also used previous to cutting the handle of the mallens and tenotomy of the tensor muscle.

In Genito-Urinary Surgery we find it invaluable for circumcisions. It is helpful to soothe pain of chancroids and chancres before and after cauterization, as a dusting powder. It can be well employed in solution for the removal of tumors about penis, anus and vulva. Curettage of uterus has been successfully and painlessly done by its aid.

It is valuable in anaesthetizing sensitive vaginal and rectal mucous membrane walls, previous to examinations.

Internal urethrotomy can be done painlessly with its aid. Don't use over 2% in urethra.

In Diagnosis we can also employ cocaine to advantage. It is well to anaesthetize hypersensitive mucous membrane of throat and nose when you desire to examine the fauces and make posterior rhinoscopic and laryngeal examinations. The same is true for vaginal, rectal, urethral and ophthalmic examinations.

In Therapeutics.

(1) It is a great aid in securing comfort for the man with an anal fissure, especially for pain caused by bowel movements.

(2) It serves a useful purpose in relieving itching and pain of hemorrhoids.

(3) In pruritus, vulvar and preputial, you may also find it indicated.

(4) In certain eczemas, especially about the anus and genital organs also.

(5) It is employed, though perhaps not always wisely, in the vomiting of pregnancy, introduction of eustachian and urethral catheters, sounds, etc. In the introduction of stomach tube, for fissured nipples, painful pharyngeal and laryngeal conditions (especially tubercular and specific) and thus giving comfort and a chance to swallow, to relieve eye pains, especially those due to corneal irritation, gastralgia,

for gastric tabetic crises, in vaginismus, previous to cauterization, and by cataphoresis for neuritis.

As to the methods of using cocaine:

(1) In operations, be clean and in every detail have your asepsis and antisepsis equal to that required in general anaesthesia.

(2) Use pure cocaine products, impurities may make it more toxic, certainly less favorable.

(3) Use fresh solutions, they deteriorate, lose their power and may become septic.

(4) Use sterile water in their preparation. Reclus says ⅛gr. is sufficient for small operations. He endeavors to limit it to 3 grs. or less for larger operations. Be on your guard in the latter case. Use your cocaine in divided amounts. Don't inject into the body at one time. It is better to use a relatively large amount of a weak solution rather than a small amount of a strong solution. He does not employ a solution stronger than 1% subcutaneously.

(5) Operate with patient in a recumbent position and thus limit your chances of getting syncope. It is well to keep them so for some time afterward.

(6) Be especially on your guard if you employ it about the nose, urethra, rectum, as your absorption is rapid and not easily controlled.

(7) Limit the drug to a certain field, and keep it there as long as you can, by using a tourniquet. This limits the amount of the agent that goes into the general circulation. This can be done in operations on extremities, scalp, penis, scrotum, etc.

(8) Expel blood from part, before application of tourniquet as much as you can.

(9) When through with your operation release the tourniquet only partly and temporarily, this admits the circulation in limited amounts or stages and thus prevents a too great an amount of the drug from being taken into the general system at once.

(10) The use of the tourniquet prevents your field of operation from being too bloody.

(11) Avoid injection into veins, mark them out if necessary before hand.

(12) Before you begin operations allow sufficient time to elapse for anaesthesia to take place.

(13) In skin incisions, inject the skin itself.

(14) Have no air in syringe.

(15) Warn patient, that he may have some pain.

(16) Plan out before hand what you would do in case of an accident—you may save a life.

(17) Know thoroughly: the signs of intoxication, are loquacity, shallow respiration, cold sweats, rapid feeble pulse, unconsciousness and convulsions.

(18) Have your remedies ready—death may result:

(1) By paralysis of respiratory centers.

(2) By fixation and rigidity of respiratory muscles.

For (1) amyl nitrite inhalations, or nitroglycerine hypodermically, strychnine sulphate 1-20, elevate feet, lower head, artificial respiration, inject ether and aromatic spirits of ammonia.

For (2) chloral and bromides, can give per rectum, morphine, inhalation of amyl nitrite, also catheterize bladder.

At a meeting of the Douglas Park Branch, a paper was read on **Observations on Influenza Pneumonia.**

Dr. C. L. Hobbs: From a study of the bacteriology, pathology and clinical course of the pneumonias of influenza, the conclusion is inevitable that a sharp division exists between true influenza pneumonia, caused by the specific micro-organism of la grippe in pure culture, and those pneumonias due to the associated inflammatory action of the streptococcus, the diplococcus pneumonia, the staphylococcus and the pneumobacillus of Friedlander. The results of bacteriological investigations have pointed out the tendency to co-operation among this group, and their inclination to be associated with the influenza bacillus, producing various clinical types of the disease. This being accetped, the diversity of opinion regarding the different forms of grippal pneumonia can be understood. One is a typical manifestation of influenzal infection, due to an extension of the primary specific inflammation along the bronchi to the air cells, while the other is from a bacteriological point of view, a complication. However, it would be unwise to attempt here too fine a distinction; the close analogy, pathologically and clinicallly, between all the types of bronchopneumonia found during an epidemic of grip, makes it possible, for the present at least, to accept the term "influenza pneumonia" in its broader sense. From croupous pneumonia, whether running a typical or an atypical course, complicating or following an attack of influenza, it stands out as an entirely separate and distinct disease.

The pathology of the Pfeiffer bacillus pneumonia is the pathology of a typical lobular pneumonia, i. e., an extension of the inflammatory process directly along the axis of the finer bronchi into the air vesicles. A cut surface of the lung shows disseminated areas of inflammation and consolidation, and from these centers, other areas radiate in many directions, but always inclosing small aerated patches; while the confluence of many such areas may produce the condition known as pseudo-lobar pneumonia. A section under the microscope shows the bronchial epithelial cells partly destroyed; here and there they are found raised from their bases, and leukocytes and masses of bacteria found packed between and under them, while the capillaries are engorged with red blood cells. The bronchioles become occluded with the products of inflammation, the air cells collapse, and later are filled with the results of active cell proliferation and desquamation. The inflammation is purely a catarrhal one, no fibrin being present. Resolution takes place through fatty degeneration of the cells that fill the alveoli. In the lobular pneumonia of the mixed infections, instead of following along the bronchial tubes, into the corresponding lobule, the inflammation invades the walls

and peribronchial tisue and passes over into the neighboring groups of alveoli, so that the typical lobular arrangement is disturbed. A cross section in such a case will show, under the microscope, the bronchi filled with pus cells, epithelium and bacteria, an intense round cell infiltration into the muscular and connective tissue layers, and the surrounding alveoli poorly defined, as their walls are also infiltrated with polymorphonuclear leukocytes. Fibrin is usually present.

The onset and course of influenza pneumonia is extremely variable, there being no such a striking clinical picture of the affection as we find in croupous pneumonia. The disease may be ushered in so quickly as to lead assurance to the belief that the disease is, primarily, a pneumonia. Usually, however, there is well marked evidence of a preceding involvement of the upper air passages; the coryza, laryngitis, tonsillitis and bronchitis, either associated or alone, point to an earlier infection of the respiratory mucous membrane. There may be simply a tracheitis, with the peculiar tickling and later burning sensation in the trachea, and which may be considered, to an extent, as characteristic of grippal infection. Again, the malaise, headache, pain in the bones and other symptoms of ordinary influenza may precede, over a longer or shorter period, the onset of the pneumonia. When fully established, influenza pneumonia is always marked by extremely rapid breathing, the dyspnoea at times becoming a most distressing feature and out of all proportion to the signs elicited by auscultation and percussion. It is of interest here to note the experimental work which has been done with a pure culture of the Pfeiffer bacillus, in which the bacilli have been killed by chloroform. When intra-venous injections of such cultures have been made in rabbits, the uniform results have been, marked dyspnoea and muscular weakness, which presents a striking analogy with the well-known symptoms in man. It is natural to assume, then, that there is produced by the action of bacilli, a toxin, which has a marked influence upon the central nervous system. The disturbance of the circulation is maintained by the quickened heart's action, the feeble and often irregular pulse, and the sluggish capillary circulation. Systolic murmurs may occur near the apex of the heart. There is no characteristic temperature curve; the high evening temperature with morning remissions being perhaps the most common. The fever rarely rises above 104°, and may at times become subnormal. Moderate pain in the chest is usually present and when very severe is probably due to a complicating plastic pleurisy. Repeated slight chills and sweating, particularly at night, are typical symptoms. The cough is very severe; dry, hacking and paroxysmal in the early stages, becoming looser, with free expectoration as the disease progresses. The sputum of the Pfeiffer bacillus pneumonia is to some degree, characteristic of the infection. It is of a greenish yellow color, muco-purulent, and disseminated throughout are peculiar small masses, which from their shape, are evidently casts of the smaller bronchi, while larger, coin-like masses, of nearly uniform size and appearance, are also usually found. The sputum of the mixed infection pneumonia is generally muco-purulent, but varies at times to a great extent. It may be blood streaked and viscid, but is more copious and is not the intimate admixture of blood and sputum which constitutes the so-called rusty sputum of croupous pneumonia. The nervous system, at times, shows evidence of involvement by the presence of insomnia and delirium. There frequently exists, in the graver cases, an albuminuria with actual renal involvement. The physical signs are those of impaired resonance, areas of patchy dulness, feeble breath sounds and fine rales, especially over the bases. Broncophony is a sign of particular value in locating the scattered pneumonic areas. Bronchial breathing is infrequent, and then only when a considerable area of the lung is involved.

The diagnosis of grippal pneumonia, as a rule, should be made readily. The presence of an epidemic and the resort to a microscopical examination of the sputum will generally lead the physician to an early recognition of the nature of the pneumonia. There should be no excuse, except in unusual cases, for conflicting croupous pneumonia with influenza pneumonia. In those rare cases of grippal pneumonia in which an entire lobe is involved and which is the result of the confluence of many lobules leading to areas of larger consolidation, the slow hardening of the lung, the nature and microscopical examination of the sputum should make reasonably clear the character of the disease. What is more difficult and at times impossible, is to attempt a differentiation of the various types of the grippal pneumonia of mixed infection. Cases are not infrequently reported in which only the most careful microscopical examination of the sputa will clear up the diagnosis between acute tuberculous pneumonia and the pneumonia of influenza. It may be well for me here to report briefly a case coming under my own observation. The patient, a girl about eleven or twelve years of age, came to my office in the spring of 1903, with the following history. Two years before an aunt had died of tuberculosis in the apartments in which the girl was still living. Three months before, her father had died, after a somewhat prolonged illness, of pulmonary tuberculosis complicated by a cirrhosis of the liver. The girl had never been dangerously ill, although she had passed through some of the ordinary diseases of childhood. In appearance she was delicate and somewhat anaemic. At this time she had been sick for about a week. She complained of some pain over the right side of the chest and a severe headache. Loss of appetite, night sweats and weakness were present. Her pulse was considerably over a hundred, temperature 103°, breathing rapid and difficult, with a severe, hacking cough. Physical examination showed a moderate diffused bronchitis over both sides of the chest. At the angle of the scapula, on the right side,

there were a few areas of patchy dullness, with fine crepitant rales. Taking into consideration the bad family history, the fact of her having been exposed over a long period of time to the danger of tuberculous infection, I made a grave, though reserved prognosis. I had her put to bed immediately, and on the following day I made an examination of the sputum. The result showed the presence in almost a pure culture of the Pfeiffer bacillus, and the absence of the bacillus of tuberculosis. The disease ran its course in about four weeks, with night sweats, severe cough, muco-purulent sputa, pain, intense dyspnoea at times, prostration and the signs of a bronchopneumonia, over both sides of the chest. Convalescence was rapid in this case.

In general, the prognosis is favorable but is modified by the character of the prevailing epidemic, the age and physical condition of the patient. In the very young, the aged and those suffering from pulmonary tuberculosis or cardiac affections, the outlook is unfavorable. Certain cases show a tendency to pulmonary oedema and great cardiac weakness. Cases of fatal syncope as the result of very slight exertion have been reported.

The nasal secretions and sputum should be disinfected and the patients isolated as closely as the conditions will admit. As in lobar pneumonia, the treatment of influenza pneumonia is largely sympathetic, and in the graver cases there is, in the dilated, overworked right heart, the same element of danger which must be combated. Digitalis, strychnia, normal salt injections and free stimulation with whisky must be relied upon here. Hidro-therapy, with the use of Dovers powder in children and of morphine in adults, may be relied upon to relieve the hyper-pyrexia, pain and restlessness. The inhalation of steam impregnated with creosote is of great value in ameliorating the severity of the cough and promoting free expectoration. In those cases in which an albuminuria is present, careful attention to elimination through the skin, kidneys and bowels is absolutely requisite. The after treatment is that of the convalescent stage of ordinary influenza.

County and District Societies.

PEORIA CITY MEDICAL SOCIETY.

Regular meetings are held in the Observatory Building, Peoria, on the first and third Tuesdays of each month. Membership 77.

Officers.

President ..... Dr. J. C. Roberts
First Vice President ..... Dr. E. E. Gelder
Second Vice President ..... Dr. B. M. Stephenson
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The Peoria City Medical Society met in regular session at the Observatory building on Tuesday evening, January 3, with Dr. J. C. Roberts, in the chair.

Some business of a routine character was transacted. The essayist read a very instructive and interesting paper, one worthy of careful reading.

Movable Kidney.

Dr. Gelder read the paper of the evening. He took up the symptoms, etiology, method of examination, diagnosis, palliative, and operative treatments; under the latter head he gave a brief review of the operations which had been devised, and a detailed description of the Edebohls' method which he advocated. He then made the following report of five successful nephrorrhaphies.

I am indebted to Dr. Barton Cooke Hirst of Philadelphia for the privilege of assisting him in operating on the following two cases, and at this time for the privilege of reporting them.

Case I. Miss E. P., age 29, single, school teacher. Present illness began one year previous to operation, at which time she noticed that she kept her right shoulder higher than the left, and that while sitting in school she would often lean toward the left side and stretch her right side; she said that doing this made her more comfortable. Ten months later she was suddenly taken with pain in the right side, simulating appendicitis, which lasted for a few days; this attack was followed by subacute pain and the sensation of something moving in the side.

Examination. Right kidney on line with umbilicus, and freely movable. Dr. Hirst catheterized both ureters and tied the catheters in to collect the urine pure from each kidney. In two hours the right kidney excreted 2 fl. drms., and the left 3 fl. oz.; both specimens were normal.

Operation. Feb 9, 1903, at Howard Hospital, Philadelphia. Lumbar incision made and kidney suspended by Edebohl's method. Convalescence uncomplicated. Discharged March 3, 1903.

Case II. Miss E. R., age 25, single, stenographer. Present illness. For 14 months has had a dragging pain of varying intensity in the right side of the abdomen; never nauseated, radiating to groin. Examination. Right kidney freely movable down to pelvic brim.

Operation. June 6, 1903, at Howard Hospital, Philadelphia. Lumbar incision, kidney suspended by Edebohl's method. One week later when I redressed the wound I found it had healed nicely; on palpating the abdomen I found a mass about 4x3 inches in size just above Pouparts ligament on the right side. It was movable to a limited degree; I asked Dr. Hirst to see her also and he diagnosed it a hematoma. Examination one week later the mass not as large and higher up than before. One week later she was discharged free of the symptoms and the mass nearly gone.

In a recent letter from Dr. Hirst he told me

that both patients reported at his office in September, 1904, being respectively 19 and 15 months from the date of operation, to let him know how well they were. He said they had been entirely relieved of symptoms by operation.

Case II. also writes me that in the two months following her operation she gained 20 pounds and has been in the best of health ever since.

It was at the request of Dr. R. A. Kerr of this city, that I kept the histories of the following cases, and that I have written this paper; I am therefore indebted to him for this privilege, and for his kindness in allowing me to assist him in the following operations.

Case III. Mrs. L. F., age 32, married, Peoria: 5 children, last one born two years ago.

Previous Medical History—Negative.

Present Illness. She dates her trouble from the birth of her first child. Her symptoms have been headache; backache of a dragging nature, with occasional attacks of sharp pain across the upper abdomen; some indigestion no constipation; is inclined to be despondent at times.

Examination. Patient a well built, well nourished woman, who says she never has been thin; weight 141 pounds. Right kidney easily felt, and freely movable in right side of abdomen.

Operation—Sept. 14, 1904, at Cottage Hospital. Essentially the Edebohl operation. The kidney was enlarged, being 15 cm. (6 inches) from pole to pole; it was markedly congested; capsule adherent, and when stripped back there was free bleeding from the parenchyma, which was controlled by the application of hot towels. No other complications, convalescence uncomplicated.

Case IV. Miss E. B. age 28, single, Peoria, stenographer since 16. Family history—two brothers died of nephritis.

Previous Medical History—Negative. Present illness—For five years has suffered from headache, backache, and a dragging pain in the abdomen; capricious appetite; nervous indigestion, palpitation, and polyuria; chronic constipation; patient says she has carried the right shoulder higher than the left ever since trouble began, and that she could feel a movable lump in her side by palpation.

Examination—Small woman, rather thin, (says she was heavier before trouble began); kidney easily felt and freely movable in the right upper quadrant of the abdomen.

Operation—Sept. 24, 1904, at Cottage Hospital, Edebohls' operation. Kidney not enlarged, but congested and capsule adherent. Convalescence uncomplicated. Patient kept in hospital longer than three weeks to treat her for nervousness.

Case V. Mrs. M. S., age 43, married 10 years, no children, no miscarriages. Previous Medical History—Negative.

Present illness—Five years ago, after doing other hard work, she was cutting grass with a heavy scythe when she felt something jump in her right side; though it caused her no pain she stopped working. The next time she bathed while rubbing her abdomen, she could feel a movable lump in her right side; but as it was not painful she did not consult a physician at that time. Since then she has suffered from attacks of headache ending with nausea and vomiting; a dragging sensation in the abdomen —never very painful; palpitation of the heart, and has never been able to lie on the left side without having pain in the right side.

Examination—Fleshy, well built, well nourished woman; right kidney movable to pelvic brim and median line.

Operation—Oct. 1, 1904, at Cottage Hospital, Edebohls' operation. Kidney slightly enlarged, capsule tight and adherent; cortex congested, and bulged out on splitting the capsule. On reflecting the capsule, owing to the adhesions, there was considerable oozing of blood from the kidney substance; this soon stopped on the application of hot towels. Convalescence uncomplicated.

I do not think that present day writers honestly believe that repeated pregnancies, lacerated pelvic floors, external violence, or long wasting diseases are usual causes of movable kidney. It is another example of how one writer copies from another—possibly fearing he will be criticised if he does not include all of the old myths.

Harris has reported some very interesting work on a large number of cases to try to discover the relation of body conformation to this affection. He believes from his investigations that a congenital or acquired narrowing of the middle zone of the body is the greatest predisposing cause.

You will observe in the few cases I have reported to you that only one of the five women ever had a child, and that none of them ever suffered from a long illness. Case V gives an interesting history, and it would seem that in her case the kidney was dislodged by severe contraction of the muscles of the back; though this was likely the exciting cause, I believe there were predisposing causes possibly in body conformation, enteroptosis or something of that nature. Owing to the close attachment of the duodenum and hepatic flexure of the colon with the anterior surface of the kidney, it would appear that descent of these portions of the intestine would be an important factor, and it seems to me that this plus the weight of the liver is the only relation of tight-lacing to the occurence of movable kidney. The kidney is so deeply placed that constriction alone could hardly displace this organ; but it could push down the other viscera which would in turn either press or drag down the kidney. Case I shows the effect of prolapse on the function of the kidney; in a given time the normal one secreted three fluid ounces of urine, while the other one only secreted two fluid drams or 1/12 the amount of the one in normal position. The great increase in size of the kidney noted in Case III may have been a result or a cause of its descent; I should think the former.

Dr. O. B. Will—The paper is timely and the subject one which is always interesting. I also believe that too much importance has been attached to the condition of late years. In

my work which affords me the opportunity of examining the abdomens of a great many women, I always ascertain the location of the right kidney as I have been interested in the frequency of the condition up for discussion tonight. In my experience about 20% of women have a movable right kidney, and I have observed it more frequently in unmarried women. As many patients go through life with this affection and never suffer from it I would not recommend operation in every case; but I do believe that we should fix the kidney if the symptoms are severe enough to warrant it. I agree with the paper that congenital predisposition is one of its greatest causes.

Dr. Kerr—It is my opinion that the severity of the symptoms, especially those which are reflex, depends on the nervous constitution of the patient. In those of the neurasthenic type this affection will produce marked symptoms, while those of a more staid disposition will suffer little from it. That secondary changes occur in a prolapsed kidney I am certain; I never operated on a case in which I did not find adhesions from past or present inflammation, and in one of the cases reported tonight (Case V) not only was the true capsule adherent to the kidney cortex, but the fatty capsule was so bound down to the fibrous capsule that it was very difficult to strip it off. As to the etiology, from my experience with railroad and like cases, I do not believe that trauma is a common cause of descent of the kidney. A contracted middle zone of the body I have observed in most of my cases, except the last one reported tonight and she had an unusually large middle zone. It seems to me that pressure of the liver must be a very potent cause of this condition. I hardly think that the explanation given for the prolapse of this organ in Case V is correct; if she had dislocated the kidney during the exercise described, the sudden tearing of it loose from its normal attachments would likely have induced more pain than she says she had. I would rather suppose that she caused a further descent of an already loose kidney.

With this affection there often coexists a certain degree of visceroptosis and of course lumbar fixation of the kidney will not stop the symptoms caused by this other abnormality, and this may explain why some cases are not relieved by operation. I believe, though, that the operation is useful in these cases as it removes a condition which favors descent of the other organs.

Dr. Roberts—From the etiological standpoint I have in mind a case which is interesting. A woman had been suffering from indigestion and constipation for five or six years prior to my seeing her. At the time I treated her she had no prolapse of the kidney. Later she fell into the hands of the nurses of the Peoria branch of the Battle Creek Sanitarium and they treated her by the frequent and long continued application of hot towels to the abdomen. The result was a marked relaxation of the abdominal walls, hemorrhoids, prolapse of the uterus, and prolapse of the right kidney. The pain from the latter was very severe and no mechanical device would relieve it; but she was entirely relieved by operation. In this case it seemed to me that the relaxation of the abdominal walls was the cause of her trouble.

Dr. E. L. Davis—We should remember that the kidney is not fixed normally but that it has a certain physiological excursion, and in some people this range of motion is greater than in others but these persons do not need a fixation of the kidney.

Dr. Marcy—I have had considerable personal experience with movable kidneys and have known of many other cases. I am skeptical on the advisability of sewing them up. I have known of cases in this city where a lumbar fixation was done that failed to fix the organ, and it came loose again; in one case it was repeated. I would still hesitate before advising operation unless the symptoms were severe.

Dr. Gelder—The discussion tonight brought out just what I had hoped that it would; that is that this question has two sides. For the sake of the kidney alone there is, as I said, only one thing to recommend, and that is early operation to prevent secondary changes and perversions of function in it; but our patients are beings with many organs all of which should receive their due consideration when we are deciding the expediency of an operation. I think a conservative view to take of the matter —would be only to operate on kidneys which are pathological; and to consider them pathological only when they produce symptoms—either intra, or extra-renal.

Meeting adjourned.

FULTON COUNTY MEDICAL SOCIETY.

Regular meetings are held the first Tuesday of of May, July, October and December.
Membership 43.

Officers.

President, J. W. Conelly.....Farmington
First Vice-President, S. A. Oren.....Lewistown
Second Vice-Pres't, G. R. Blackstone..Table Grove
Secretary-Treasurer, D. S. Ray.....Cuba
Necrologist, F. R. Miller.....Canton
Board of Censors, Maud T. Rogers.....Cuba

Dr. James E. Coleman of Canton read the following paper at the December meeting:

The Doctors' End of the Proposition.

The disparity of fees between the surgeon and the doctor is at present the source of much comment, and the question arises, "are medicine and surgery pulling apart?" That medicine is indebted to surgery we frankly admit, but does surgery owe anything to medicine? not at all; the city surgeon lives in a realm of grandeur to himself, his air of wisdom and importance is at times amusing. However, he is easily approached—if there is a fee. It is supposed that every Doctor is capable of taking care of every case that comes to him, sometimes it unfortunately happens that the country doctor, either from lack of hospital facilities, or the burden of multiplicity of diseases meets with a case which he feels it would be better for a specialist to treat.

This causes him much anxiety, and con-

cern. The surgeon promptly takes advantage of the doctors misfortune, and charges the patient all he can get. The doctor is supposed to "land" the surgeons fee. He assures the patient that he has made a diagnosis, and that the operation is necessary—also the cash. He tells his patient that the surgeon is a great man, that his life is safe in his hands, aside from the per centage of death necessary to the special case, and he prepares the patient for operation. So far so good, but how many doctors receive pay in proportion for these services? Very few, usually hard earned visits at $1.50 per. Now in whom does the patient put his trust? In his home doctor, always, so he asks him to go along, is he willing to pay? Hardly ever. He is saving his money for the surgeon. Now what happens, the patient is landed in the hospital, and immediately is taken in charge by an Interne just out of school, with a swelled head, but no experience. The Interne knows the general practitioner has no brains, because if he **could** operate, **why** does he bring his patient **"to us."**

The doctor feels very much "like a cat in a strange garret." The surgical nurse eyes him reproachfully as if she feared he would step into the sterile instrument tray, and he is so much scared that he is likely to do so, before he gets through with these, "great ones of the earth." In the operating room the solemnity is great, the country doctor feels that the sign should be raised, "tread softly the dead are here."

After the operation the patient is calling for the home doctor, and the home doctor wants to go home. The Interne makes him feel that he is a usurper, no matter how much anodyne or stimulant medicines the patient has been accustomed to take. The average surgeon, who has no faith in medicine, orders it all discontinued—**"at once,"** and the lack of these sustaining influences is added to the shock of the operation.

In all the long list of patients that I have taken to the hospitals during my 20 years of ministry to the sick, I have **never once** been asked by the surgeon **what** I was giving the patient, or consulted as to what **should** be given. Now, is the surgeon willing to regard the physician as a partner in the case? Never; the physician is only **"the messenger"** who "delivers the goods."

Now, what is the result? Every country doctor has an ambition to become a surgeon. They also desire to "tread on air" and absorb large fees. Is this good for either patient or doctor? we think not, better would it be for medicine and surgery to unite as in the good old days, the surgeon and doctor should go into partnership and divide the fee and surgery should quit "knocking" medicine.

That grand old surgeon Moses Gunn, who has never had a peer, taught, that surgery should not be made a specialty until after ten years in the medical field, while this is not good doctrine perhaps at the present day, yet the surgeon should be taught along with Christian scientists, osteopaths, magnetic healers and mediums, who always lay claim to the healing art, that medicines are valuable aids to help the sick, and that the physician, humble and poorly paid as he may be, is yet an expert, in giving advice as to ventilation, diet, bathing etc. Small hospitals are springing up all over the country. The practitioners are taking post operative courses in surgery and doing their own operating, and whether he will or not, the city surgeon must, "divide the fee," and the country doctor is not leaving his business to go to the city with a patient and pay his expenses besides. The wave of lunacy is subsiding and medicine is coming back to its own. A dose of quinine taken early will break up a cold, the Christian scientists to the contrary notwithstanding. A dose of castor oil will affect the osteopath just as surely as it has the doctors patients during the past years, and the surgeon who can only affect his patient through a drainage tube, had better get down and out, and give somebody with brains a chance.

Now in regard to a commission being paid to the doctor by the surgeon without the knowledge of the patient. The Chicago doctors started an investigation along this line and the inference is, that the country doctor is trying to "hold up" his patient at the expense of the surgeon, and it is for the country doctor to refute this slander.

The average country doctor is as honest and honorable as the celebrated Dr. Wm. MacLure or the city surgeon, I have taken a number of cases to the surgeon, yet have I never received a commission, neither do I know of a case where a commission has been extorted, this I submit in defense of "the **doctors** end of the proposition." But I do believe that the case should be treated in this wise. The doctor should tell his patient that for so much money I will take you to the surgeon, and **we** will treat you, and share money and responsibility. All of which is respectfully submitted.

DECATUR MEDICAL SOCIETY.

Regular meetings are held in the Decatur Club Rooms the fourth Tuesday of each month
Membership 62.

Officers.

President ..... Lynn M. Barnes
Vice President ..... Clara Garber
Secretary-Treasurer ..... W. C. Bowers
Board of Censors: E. A. Morgan, F. M. Anderson, J. Stebbins King.
Program Committee: W. C. Bowers, Chairman; E. J. Brown, W. C. Wood, A. Wilhelmy, L. M. Barnes.
Delegates to the State Society: Cass Chenoweth, W. C. Bowers, E. J. Brown.

The Decatur Medical Society held its regular monthly meeting on Dec. 30, 1904. This meeting was postponed from Dec. 24, 1904.

M. P. Parrish read a paper on **Acute Pancreatitis** and recited interesting cases that he had observed and showed specimen of inflamed pancreas obtained from post mortem: Tyler Meriweather opened the discussion.

W. K. Hoover was not present with his paper on **Blastomycetes with report of cases,** but the subject was discussed by A. F. Wilhelmy, Clara Garber and others.

CLARK COUNTY MEDICAL SOCIETY.

Regular meetings are held at Marshall, quarterly. Membership 12.

Officers.

President ..... Jos. Hall, Westfield
Vice President ..... R. H. Bradley, Marshall
Secretary ..... L. J. Weir, Marshall

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Clark County Medical Society met at 4 P. M. Jan. 12, 1905, at Marshall. Called to order by the president.

Members present: Hall, Bradly, John Weir, H. W. Haslit and L. J. Weir.

Subject for the meeting **Prevention and Cure of Tuberculosis** was enthusiastically discussed by all present, many important points were made among them were the following: All people should destroy the sputum as it is the means of spreading tuberculosis, pneumonia, grip, typhoid fever and other diseases. Tuberculosis should be recognized by everyone as a seriously contagious and therefore preventable disease.

Outdoor exercise (walking one block to five miles daily) eating concentrated food (eggs, meat and milk) and lots of fresh air (in tent, on porch or in open room day and night, summer and winter) these are the best means of curing tuberculosis. Medicines are useful for symptoms, but we have no specific. After an animated discussion lasting two hours, society adjourned all regretting that we did not have two hours more time available.

CHAMPAIGN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Champaign at the Hotel Beardsley the third Thursday of each month. Membership 60.

Officers.

President.....J. M. Bartholow, Champaign
Vice-President.....C. M. Craig, Champaign
Secretary-Treasurer.....C. D. Gulick, Urbana
Censors..W. F. Burres, A. S. Wall, John Marten

—

The Champaign County Medical Society held its annual meeting in Champaign, Thursday, Dec. 15, 1904. In the absence of the president Dr. Salisbury, Dr. J. C. Dodds was called to the chair. Reading of minutes of the two previous meetings of the society were approved.

The following is an abstract of a paper delivered before the society by Prof. Frank Smith of the University of Illinois on **Tapeworms.**

The speaker called attention to the three species of tapeworms infesting human beings, with which physicians of this region are most likely to be concerned. With the aid of specimens and wall charts the principal facts of their anatomy and life history were described and the means of infection and prevention were explained. The following points are selected from the various topics receiving attention.

One of the most helpful publications dealing with the human tapeworms is Bulletin No. 19, of the Bureau of Animal Industry of the United States Department of Agriculture entitled, "The Inspection of Meats for Animal Parasites."

The human tapeworm altogether most commonly met with in this country is the well known "beef" tapeworm 12 to 25 feet long and consisting of a small scolex followed by 1000 to 1300 proglottids of which the oldest are filled with embryos and pass off from the human intestine with excrement. Such embyros are liable to reach the muscle tissue of cattle via the intestine and develop into the bladder worm stage, forming the "measly beef" of meat inspectors. The muscles of the jaw are almost certain to be affected, to a less extent the heart and tongue and to a still less extent other parts. Human beings eating such infected meat that has not been subjected to proper conditions for the destruction of the tapeworm larvae are liable to become hosts of the adult parasites. Prevention may be accomplished by destruction of the excrement of the human host of the adult worm and the tapeworm embryos contained or by such treatment of infected beef as to insure the destruction of the larvae.

The "pork tapeworm" is another species for which the human being plays the part of host for the adult worm. It is but rarely met with in this country in spite of the opinion of many to the contrary. Since the enforcement of regulations requiring rigid inspection of slaughtered animals in some parts of Europe, this species is also becoming much less common in those regions. "Pork" tapeworms are in general considerably smaller than the "beef" tapeworms but cannot be distinguished with certainty by size alone. The scolex of the "beef" tapeworm is provided with four suckers but no circlet of hooks, while that of the "pork" tapeworm has both suckers and hooks. The uterus or median canal of the old proglottids of the "beef" tapeworm has seventeen to thirty branches on each side, while in the old proglottids of the "pork" tapeworm there are but seven to twelve branches on each side. This character can be readily determined by squeezing the old proglottids between two pieces of glass and examining it with a pocket lens. Old proglottids of the "beef" tapeworm commonly come off separately while those of the "pork" tapeworm frequently form groups of three or four attached together.

Embryos of the "pork" tapeworm commonly develop in the tissues of the hog forming "measly pork" and from such infected meat man may become the host of the adult worm. Unfortunately the body of man supplies the conditions necessary to the development of the embryo of this species which in its formation of the bladder worm stage may lead to serious disturbances in the human patient if such development takes place in some such organ as the heart, eye or brain as is not infrequently the case in countries in which this species is more common. A human being infected with an adult "pork" tapeworm may become a source of infection by the larvae for either himself or his associates. Prevention as in the "beef" tapeworm.

The echinoccoccus tapeworm causing the

hydatid disease of man, sheep and swine is as yet comparatively rare in the United States but is now established and increasing in frequency. Some cases have been reported from our own state. Statistics indicate that fifty per cent of the human patients suffering from this species of parasite die within five years. There is usually no remedy but the knife and this fails as often as it succeeds.

The adult echinoccoccus tapeworm lives in the intestine of the dog and attains a length of only one-fourth of an inch but an infected dog usually harbors hundreds of them at a time. From these adults, embryos pass off with the excrement and via the intestines and circulation are liable to reach the liver, lungs, heart, brain or other organs of man, cattle and various other animals. In these organs the larvae multiply and produce growths which may ultimately weigh many pounds and lead to the loss of function of the organ and to the death of the host. Prevention may be through not permitting dogs to eat viscera of infected animals about slaughter houses or elsewhere and by greater care in the relation sustained by human beings to dogs that by any possibility may be infected.

At present we enjoy far greater immunity from such parasites than do the people of most countries, but we must be intelligent and watchful if we would retain this advantage.

At the close of the reading and discussion of this paper, the society extended the author a vote of thanks for his contribution to the interest of the profession.

Dr. F. S. Diller of Rantuol, Ill., followed with a very interesting paper on "Tetanus," giving a detailed history of two fatal cases and treatment used.

Following a brief discussion of this paper Dr. S. S. Salisbury's valedictory address was read by Dr. Jno. Marten; Dr. Salisbury being indisposed with grip and unable to attend the meeting. The title of this paper was "the peculiarities and modication of disease of old age." After very carefully considering the anatomical and histological changes of the various tissues and organs incident to old age. The author proceeded to show in a strikingly clear way, that the disease in the aged necessarily means not only modified symptoms but in specific instances a modified pathology. The statement made by one of the members in the discussion of the paper, that Dr. Salisbury's paper read as though it had been prepared fresh from the autopsy table, was justified by an abundant evidence throughout, that the author was thoroughly acquainted with the minute anatomy and pathology of the disease with which his subject dealt. As before stated the doctor was unable to be present and at close of discussion the society voted him a message of thanks and sympathy.

Dr. Wm. Houn's resignation as a member of the society was next read and granted and the secretary authorized to notify State Society of his resignation.

The annual election of officers resulted in the following being chosen: President, Dr. J. M. Bartholow; Vice-President, C. M. Craig; Secretary and Treasurer, Jas. S. Mason; Censors, W. F. Burres, A. S. Wall, John Marten. The former secretary Jas. S. Mason declining re-election, resigned and Dr. C. D. Gulick of Urbana was elected secretary. Dr. C. B. Johnson was appointed a committee on paper for the ensuing year.

There being no further business before the meeting the society adjourned.

P. S.—Drs. A. L. Collin, Naomi Pierce Collin, C. H. Zoger, applied for membership. Elected to membership in the society Dr. Lucy Exton, and Dr. Cyrus Newcomb.

LOGAN COUNTY MEDICAL SOCIETY.

Officers.

President, J. L. Lowrie.....Lincoln
First Vice-President, L. F. Curtis.....Elkhart
Second Vice-President, Maskel Lee.....Atlanta
Secretary, H. L. Oyler.....Lincoln
Treasurer, W. H. Kirby.....Chestnut

Membership 20.

The October meeting of the Logan County Medical Society was held in the city council chambers at Lincoln, October 20, 1904, President J. L. Lowrie, in the chair.

The following applications for membership were read and favorably acted upon:

J. T. McDavid, M. D., Lawndale; H. M. Van Hook, M. D., Mt. Pulaski; L. E. Rourke, M. D., Lincoln.

The subject of contract practice was brought up and discussed freely, the consensus of opinion being that contract practice is not ethical and is beneath the dignity of the profession.

H. S. Oyler of Lincoln moved that a committee of three be appointed to call a meeting of the physicians of the city of Lincoln to be held in November for the purpose of organizing a club society whose object would be to bring the physicians of the city into closer social and business relations.

Committee appointed were H. S. Oyler, R. M. Wilson and L. T. Rhoades.

J. L. Lowrie of Lincoln presented the society with a thoughtful paper on **Typhoid Fever.**

Dr. C. C. Montgomery of Lincoln gave a very interesting paper on **Drugs Used to Produce General Anaesthesia.**

Chloroform, Ether, A C E Mixture, Nitrous Oxide Gas.

Some points to be observed in the choice of anesthetic for a given case and some points to be observed in the giving of each.

Much has been written on this subject and each of them have their adherents in different parts of the country and it is to bring out the consensus of opinion in this community that this paper was written.

I wish to state in the very beginning that much more depends on the anesthetist than on the drug used in most cases.

Chloroform. This we place at the head of the list as it is the one we should use in 90% of all cases. It should always be procured of a reliable firm and put up in 4 oz. bottles protected from the light as it decomposes with age and

sunlight. Chlorine and Hydrochloric acid being set free and the chloroform becoming irritating and unfit for use. Chloroform vapor when given near an open light is decomposed into carbonyl chloride which is very irritating to the respiratory tract. Patient for this as for all of them should be kept on light or liquid diet and laxatives given or free purgation the night before and should not eat anything for six hours before it is to be given. If it becomes necessary to operate after a heavy meal the stomach tube can be used to empty the stomach. The effects of chloroform can be best controlled when given by the drop method on an esmarch frame covered by three thicknesses of gauze. The patient should not be frightened as this tends to produce shock; a few drops should be placed on the inhaler and plenty of air allowed with it so as to let the patient get accustomed to it for if you choke patient with the first few whiffs he is apt to protest against taking more of it. One should not tell the patient to count or take deep breaths but a better plan is to tell him to breathe naturally and supply the anesthetic to suit his breathing, color of face, reflex of eye and type of respiration. I often give an anesthetic from beginning to end without taking pulse, this tells you but little that the experienced anesthetist does not already know. To give an anesthetic with the least amount of danger, the anesthetist should know every step of the operation to be performed so as to gauge the anesthetic accordingly. If the operation is to be a laparotomy the patient should be deeply under for the first incision. He should know how long it will take this particular surgeon to cut through the abdominal wall as the skin is the most sensitive part and pain acts antagonistic to chloroform. For the rest a small amount will suffice. Patients stand manipulations inside the abdomen much better if not too deeply under the anesthetic, especially is this true if large tumors or a large amount of fluid is to be evacuated where pressure on the large vessels is rapidly removed. Later the anesthetic can be increased when stitches are to be placed. For a curretage patient should be deeply under the anesthetic when dilatation of cervix is begun —this will arouse her some anyway and the curettement can be done with a small amount more. This operation can be done without pain on less than two drams of chloroform and so with a circumcision if patient is nicely under the anesthetic at time of incision no more need be given.

The points I wish to bring out are these—there is no set rule for giving chloroform but every patient and every operation is a case unto itself and must be governed accordingly and do not to attempt to instruct the patient how to take the anesthetic but give it to him. It is well to anticipate his fears. Tell him that he will feel at first as though it was choking him but that this will soon pass off. To encourage him tell him he is doing fine, this will allay his fears. If patient becomes nauseated crowd the chloroform, this will stop it. If you notice ashy pallor and irregular breathing stop the anesthetic and give air. The tongue should be held out by catching jaws at the angles. If this is not watched he becomes asphyxiated and receives the vapor of the anesthetic not sufficiently diluted with air.

Some cases where chloroform is not suited where any other anesthetic could be given. First those few unexplainable cases where the patient is found not to take it well. Ether should be resorted to in cases of adenoids with anemia, cases of shock and extreme and prolonged weakness.

Chloroform in Labor—no well authenticated case of death due to this anesthetic has to my knowledge ever been reported when it has been used at this time. This condition some way robs chloroform of its dangers and in over 100 cases where I have given it at this time I have never seen nausea due to the anesthetic either at time of giving or following its use. This I cannot explain and only state facts as I have observed them. My experience with it at this time is the excuse for the following statement: That no woman, especially a primipara, should be asked to bear the intense pain of last stage of labor without its aid. I would only caution with this statement the uterus should be more closely watched to see that one gets good, firm contractions and it is well to guard this by giving one dram of Ergot after the expulsion of Placenta. The perineum can be protected better and pains better controlled at this stage when an anesthetic is used. The following is from Hewitt on anesthetics.: From an analysis of 210 fatalities due to chloroform in general surgical practice, he finds 150 in males and 59 in females; one not reported. 109 medical cases collected by the committee of the Royal Medical and Chirurgical Society—101 collected by Keppler, age ranging from 5 to 60, age seeming not to enter as an etiological factor. Nature of operations: Amputations heads the list of fatalities, these being the operations in which we would expect to find shock entering as a factor; then later in the list we find 18 for extraction of teeth—this being ½ the number for amputations. As an explanation for this the patients are less carefully prepared and anesthetic often given in sitting or partially sitting positions, which should not be done with chloroform, and then too, it being a minor operation, is apt to be done in a stage of excitement. Stage of anesthetic at which death occurred before full effects of chloroform—93 during full effects, 68 after operation , three not stated.

Cases that have come to my notice and not reported and hence are not for publication—First case: Boy of eight years, suffering from adenoids, died from first few whiffs of anesthetic. 2nd. Male, aged 30; injury to finger; attempt at removal with ethyl chloride, then cocaine, then when patient was in shock from pain, chloroform. Died as in previous case. 3rd. Medical student as anesthetist, interested in operation; patient died fully under anesthetic.
4th. Two cases in heavy drinkers, severe crushing injuries to limbs; died in first or beginning of second stage of anesthetic.

Several cases are recalled where it became necessary to resort to artificial respiration, two

due to allowing tongue to drop back, not allowing a sufficient amount of air to mix with the chloroform vapor. Two cases due to excitement of anesthetic putting patient too deeply under anesthetic then allowing patient to partly come from under its influence then as he began to struggle, quickly putting patient too deeply under again.

One case when anesthetist was too deeply interested in operation to watch patient as closely as he should. Patient received an over supply of anesthetic, artificial respiration continued 20 minutes, patient recovered.

Ether. This should be kept in well stoppered cans; it is decomposed by air and sunlight, acetic acid is set free, rendering its vapor very irritating. Can be given with Allis inhaler, paper cone or a close inhaler, or by the drop method. Ether should not be used in operations involving the brain as it causes too much congestion. It should be used when there is a suspicion of trouble in the lung, as it is said to arouse to activity latent tuberculosis.

In atheroma as it raises the blood pressure and there is a tendency for the patient to struggle, it may cause cerebral hemorrhage. Its inflammability is great and should not be nearer than 8 feet to an open light.

It is more apt to be followed by bronchial troubles and pneumonia than is chloroform and doubtless causes more irritation to the kidneys. It is to be preferred to chloroform in cases of shock, in adenoids, and for minor operations where it is advisable to operate in stage of excitement.

A C E Mixture. Best given by one drop method—it acts more slowly there is not the depression of the chloroform nor the excitement of the ether and can be used where the others are feared.

Nitrous Oxide, Laughing Gas. An expensive apparatus is needed. This produces a temporary anesthesia. It acts quickly and is chiefly used for the extraction of teeth. It is practically free from danger. An apparatus is in use for the giving of gas and chloroform, gas and ether, gas and oxygen but with this I have had no experience.

The bowels and bladder should be emptied before taking gas as this is apt to cause an unconscious evacuation of one or both organs. If the urine is examined the following day after chloroform or ether has been given it will be found to contain red blood cells and I recall a well marked case of hematuria following anesthesia; in this case, two days preceding this anesthestic anesthesia had been used for diagnostic purposes. The anesthetist should be furnished with a careful history of patient, age, sex, temperment, nature of operation and a copy of the urinalysis. Then if the cautions and peculiarities of the different anesthetics are observed and the proper ones chosen there should be but few accidents due to the anesthetic.

Methods of Resuscitation. Stop the anesthetic. If the respiratory centers are at fault raise the foot of the table. Artificial respiration.

Strychnine—plenty of fresh air, oxygen if convenient, if acute dilatation of heart give digitaline, if from shock coupled with anesthesia. Stimulate, give strychnia, nitro-glycerine, digitalis, normal salt solution and keep warm.

After reports on cases by several members, the society adjourned.

H. S. Oyler, Secretary.

MORGAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Jacksonville the second Thursday of each month.
Membership 42

Officers.

President ..... J. W. Hairgrove
Vice President ..... Josephine Milligan
Secretary ..... David W. Reid
Treasurer ..... E. T. Baker

The Morgan County Medical Society met in regular session Thursday evening, January 12, 1905, with 14 members present: Drs. Baker, Thompson, Crouch, Cole Norbury, King, Reid, Hairgrove, Dewey, Adams, Day, Black, Pitner and Campbell. Miss Seybold, Miss Chrisler and Mr. Stacy were present as visitors.

The minutes of the last meeting, including a detailed report of the Secretary and Treasurer for the past year were read and approved.

Dr. Baker called attention to the surplus of money in the treasury and suggested a change in the by-laws to lower the dues of the Society.

The Committee on Printing the new Constitution reported and the Secretary was instructed to furnish a copy to each member of the Society calling attention to certain important changes.

The Secretary called atttention to a communication from the Board of Health regarding the free examination of specimens, also a petition to Congress regarding the incorporation of the American Medical Association.

Attention was called to some changes in the new Constitution, affecting membership in the arrears for dues. On motion of Dr. Black the Treasurer was instructed to advance to the State Treasurer the annual dues of this Society so far as collected, as an aid to the State Society in its work.

The paper of the evening was by Dr. Carl E. Black, consisting of a review of Dr. G. Stanley Hall's new book entitled "Adolescence—Its Psychology and its relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion and Education."

As outlined by the reviewer, the work consists of two volumes of about six hundred pages each, and discusses the various topics in their relation to growth and development. Special attention was called to the fact that the work does not appear to have been written from any single professional point of view, although the psychology of the author largely predominates.

It contains chapters of as much interest to the educator as to the psychologist, as attested by the chapter on intellectual development and education, as compared with the one on feelings and instincts. It is of as much interest to the lawyer in its treatment of faults, immoralities and crimes as it is to the physician in its dis-

cussion of diseases of mind and body. It is of as much interest to the theologian in its handling of the psychology of conversion, church confirmation, confession, etc., as it is to the physiologist in its chapters on body growth and development, nor is it of less interest to the criminologists, anthropologists and sociologists from various points of view.

It is a work which every physician should carefully study and from which each one of us could gain much valuable information.

In conclusion the paper quoted extensively from the chapter on adolescent girls and their education, and brought out plainly the fact that the proper education for the girl has not yet been developed. The education of the girl and the purpose of that education in the woman is well summed up in the following sentence:

"To be a true woman means to be yet more mother than wife. The Madonna conception expresses man's highest comprehension of woman's real nature. Sexual relations are brief, but love and care of offspring are long. The eliminations of maternity is one of the great calamities, if not diseases, of our age."

Dr. Pitner said he was inclined to think some of Hall's statements were altogether too sweeping, and some of his statistics gathered to support and prove previously formed conclusions.

Dr. Norbury said: He regarded the work adolesence in its broad psychological and philosophical aspect as epoch marking, first, in the field of original research and exhaustive study of the literature; second, it will be the reference work for years to come for students in psychology as it is the only book in the field upon the subject. He differed with the last speaker regarding it being based on preconceived ideas supported by an accumulation of selected literature, on the contrary he said, it was the result of years of work, compiled and observed studied and sifted and in a masterly manner. The conclusions, the deductions were rational, scientific and a monument to the indefatigable energy painstaking research of the greatest practical psychologist of this country, if not of the world.

Hall is a friend of the young man and young woman and his investigations will be of inestimable benefit to them in shaping educational health and sociological problems. Educators, physicians, sociologists will all go to this great work for facts and suggestions and it is a duty which we who deal with the practical psychology of adolescence to study and work to help solve these perplexing problems of youth."

"The book should be read by laymen they will better understand youth and better able to guide them aright.

After discussion of the paper the Society passed to reports of cases. Dr. Norbury reported a case of Delirium Tremens with multiple neuritis and insanity, followed by death. He said that Delirium Tremens needed to be fed rather than drugged, and that if we would use more nutritives and less hypotics we might save some of these cases.

Dr. Reid reported a case of Retained Placenta for six weeks, after abortion at early period. No bad results.

Dr. Hairgrove reported a case of Primary Repair of the Cervix with good result and prophesied that this operation would be more frequently done in the future than in the past.

Dr. Adams reported a case of Removal of Cataract in a man of over 80 years, with local anaesthesia. Result good.

NORTH CENTRAL ILLINOIS MEDICAL ASSOCIATION.

The thirty-first annual meeting of the North Central Illinois Medical Association was called to order at 10:30 a. m., Tuesday, December 6, 1904, at the city hall, Pontiac, Ill., by the president, Dr. E. W. Weis, of Ottawa.

After roll call to which 20 members responded, Rev. Clark, of Pontiac, read a portion of Scripture relative to the physicians of Biblical times and followed by prayer.

Moved and carried we defer the address of welcome until first order of business after dinner.

The minutes of previous meeting were read and approved as read.

Dr. Marshall of Pontiac, being the only member of the Board of Censors present, it was moved and carried that the chair fill vacancies.

Drs. Knoblanch of Metamora; E. E. Perisho of Streator and Ross of Pontiac, were named to serve on said Board.

The applications of Drs. William E. Ranney Smith of Grand Ridge, Edward D. Kilbourn of Aurora, John Henry Veatch of Connell were read, accepted and referred to Board of Censors.

Dr. Ross, chairman of local committee of arrangements reported that the members of the association would be entertained at 6:30 p. m., at the Masonic hotel with a banquet by the profession of Pontiac and that all members present outside Livingston County, would receive free tickets and those in Livingston County would purchase tickets at $1.00 each.

The treasurer's report was read and referred to Board of Censors for auditing.

The Board of Censors were called upon for a report relative to the charges preferred against Drs. Rohrabaugh and Rabe last year, but no report was forthcoming.

Dr. J. F. Dicus of Streator read a biographical sketch of Dr. James A. Freeman of Millington, who died May 8, 1904, and submitted the following resolutions which were unanimously adopted:

The subject of our sketch Dr. Julius A. Freeman died at his home in Millington, Ill., Sunday morning, May 8, 1904, after a brief illness of ten days from pneumonia.

Julius A. Freeman was born in Worcester township, Oswego County, New York, March 9, 1828, the eldest son of Rev. F. R. and Lucey R. Freeman, and was in his 77th year.

When he was six years old his parents took him to La Grange, Lorain County, Ohio, where he was reared and where he received his education, and at the age of fourteen commenced the study of medicine. After his graduation from the high school of that place, young Free-

man engaged in teaching for several years, giving a portion of his time to the study of his chosen profession. His first course of lectures he took in Rochester, N. Y., at the Central Medical College in 1851 and 1852, and graduated at the American Medical College, Cincinnati, February 3, 1855. In addition to the above Dr. Freeman attended the first and twelfth sessions of lectures at the Bellevue Hospital Medical College, N. Y., and March 2, 1877, received an honorary degree from the Chicago Medical College. He first began practicing in Ohio with his uncle and preceptor, Dr. Julius Beeman, of South Cleveland, Ohio, and 1852 came to Newark, Kendall County, Illinois, where he continued in practice until September, 1861. At this time he raised a cavalry troop company, known as company K, 8th Illinois Cavalry, of which he was commissioned captain, resigning however, December 20th the same year. In August, 1862, he became assistant surgeon of the 106th Illinois Infantry and went out with them, but his health failing he was compelled in July, 1863, to resign and return home. Having recuperated he obtained a commission in September, 1864, as surgeon of the 106th N. Y. Infantry, and in January following he was assigned to take charge of the 3d division hospital of the 6th Corps, in which capacity he served until mustered out at Ogdensburg, N. Y., in July, 1865.

After his discharge Dr. Freeman returned to Newark and resumed his practice, continuing until 1875, when he moved to Chicago, where he remained about two and a half years.

The doctor has been twice married, on the first occasion, September 26, 1849, at Pittsford, N. Y., to Lucy S. Spellman, and by her had eight children, three of whom are now living, Corwin A., a physician at Leland, Ill., Vesper, a painter by trade, and Herbert H., a locomotive engineer. His present wife was Mrs. Emma Cox, of Manlius, N. Y., and by this second marriage there is one son, Harry. Dr. Freeman was a member of several medical societies, among them the Aurora Medical and LaSalle County Medical, North Central Illinois Medical, Illinois State Medical, American Medical Association.

He was a thirty-second degree Free and Accepted Mason, a member of Hesperia lodge, Chicago, of the Royal Arch Chapter at Sandwich, Ill., the Council and Knight Templar Commandery at Ottawa, Ill., and Oriental Consistory of Chicago, Ill.

Whereas, The relentless hand of death has removed from our midst another honored member of the society, Dr. Julius A. Freeman, and

Whereas, The members of this society who for years were associated with our departed friend, and knowing as we do his sterling worth, as a man, upright and just, anxious and willing to assist with word and deeds those with whom he labored; therefore, be it

Resolved, That in the death of Dr. J. A. Freeman this society has lost a faithful, true, and conscientious member, one who exemplified the highest type of the physician, with fidelity, and sincere regard for his fellow man, and richly deserves the encomium, "Well done, good and faithful servant."

Resolved, That these resolutions be entered upon the minutes of this society, and a copy thereof be furnished to the bereaved family.

Communication from Dr. Schwuchow, who had removed to 122 Center st., Chicago, and asking that his name be dropped from roll was read. Moved and carried his request be granted when dues were paid to date, viz. $1.00.

Communication from Medical Institute of Bibliography and Bureau of Translation was read and filed.

Letter from Dr. Norman Leeds of Belmont, Ill., who on account of health, desires to sell out; read and filed.

Communication from Secretary State Board of Health, relative to the laboratory for bacteriological research which has been established at Springfield for the benefit of the physicians of Illinois, was read and ordered filed.

Communication from Dr. J. A. Egan, Secretary State Board, relative to the third circular on the cause and prevention of consumption was read and referred to a special committee of three to report at the present meeting. Drs. Pettit, Pearson and Sexton were named by the president as said committee.

Dr. E. W. Weis, suggested the following changes in the constitution:

Art. 1, Sec. 2 of the constitution should have the following words added to it, "and must be a member of the local county society," if one exists in the county in which he lives.

Sec. 4, substitute for the words, "State of Illinois or elsewhere," "district No. 2," as established by the Illinois State Medical Society.

Sec. 7, should have the words, "State of Illinois," changed to "district No. 2."

Art. 10, Sec. 4, should be amended to read, "subdivision 4" a committee on program.

The duty of this committee shall be to provide a scientific program for the annual meeting.

Dr. Ross of Pontiac reported word from Dr. Ziesing of Peru who said he would be unable to attend on account of sickness. Moved and carried his communication be filed.

Also communication from Dr. Jane Reid Keefer with best wishes for Society and regrets at not being able to be present.

Moved and carried that we consider the first order of business for after dinner, moved and carried, that the welcome exercises be set for 2 o'clock.

Adjournment to meet at 1:30.

Tuesday, 1:30 p. m. Meeting called to order at 1:30. Dr. Ross for local committee, reported tickets for banquets at the disposal of the visiting members. The general programme being the next in order, Dr. E. E. Perisho read the first paper, subject, "Four Instructive Emergency Cases of Appendicitis," after which a recess of five minutes was declared in order to select a nominating committee.

Called to order again at 2 o'clock. The address of welcome on behalf of the city was tendered, in the absence of the mayor, by Mr. Graves, of Pontiac, who gave the Association a hearty welcome, which was responded to by the president, Dr. Weis.

PRESIDENT'S ADDRESS.

The Physician and the Medical Society.

By Edmund W. Weis, M. D., Ottawa, Ill.

As your presiding officer it becomes my pleasant duty to offer you some observations of a general character, as well as some seasonable advice. The latter I know will be superfluous, but the former is based upon experiences either of self or of other more competent observers.

Our profession is certainly one of apparently contradictory elements. Primarily entered into for the purpose of alleviating suffering and converting abnormal physical into normal conditions. All this however at the modest consideration of the right to existence and the pursuit of moderate pleasure. Secondarily the physician, with full knowledge of the penalty exacted is imbued with, and urgently expresses the desire to prevent absolutely the very demand for his services. In other words the medical profession stands today as it has always stood, ever ready to hasten to the call of the afflicted and by the spread of his sanitary knowledge aid in the suppression of conditions that make necessary his skill to heal. Viewed in the abstract the physician is the true philanthropist. In no other walk in life can a parallel be found. Nowhere is there exhibited that same unselfish spirit. No accusation of selfish or self seeking interest can therefore be seriously entertained as resting against the profession as a whole. These premises being true how are we to best continue in future so as not only to keep up our present standard, but to advance the same for the greatest good for the greatest number.

The science of medicine not being an exact one, its birth and evolution unfortunately was for centuries covered with a pall of superstitution. Born in Egypt and only practiced by the priests the natural result followed in that it became a part of their duty to heal the sick. Through ignorance of the operations of natural laws the effects of treatment by drugs and suggestion was ascribed to the workings of supernatural aids. History is constantly repeating itself, as we see today, similar methods being employed, and that in spite of the immense fund of knowledge obtained governing the order of nature.

In the realm of sanitation we are liable to think that at the present time the medical world has almost established correct methods by which all kinds of contagious diseases may be prevented; but to our astonishment when we read ancient history we find that what is being preached and practiced today was old long before the days of Christ. Centuries before Christ Moses acquired such knowledge from his studies with the priests of Isis that later allowed him to deduce philosophically the facts of certain causes, which eventually actuated him in laying down such laws of preventive medicine that they can scarcely be improved upon today.

In the prevention of the great White Plague if the laws promulgated by Moses had been lived up to we might almost have the assurance that tuberculosis would long ago have practically been exterminated. It is a fact that the semitic race is practically exempt from that dread disease. Behrend of London, states that in a practice of thirty-five years he has not seen a case of tuberculosis occurring in an orthodox Jew.

What Moses did not know was the bacterial origin of disease, but his deductions of the facts of certain conditions were absolutely correct. And on down from Hippocrates we find the same struggle (the cure and prevention of disease) always the same. Opposing it we find the same spirit of antagonism sired by superstition and nurtured by ignorance, continuing to the present day. We are likely to think that at the present time the lay mind is unable either to grasp the immense sacrifice made by physicians, or too densely indifferent to its own welfare. That this is not true, that it is only a continuation of the same mental process that controlled the people centuries ago, we need but look back into history both ancient and modern. Because the heathen and later the christian priests became the healers, the art of medicine was supposed to be of divine origin. The remedy was prescribed by oracular prescriptions or later by direct appeals and suggestive devotion. The desire for miracle working made superfluous any systematic study. Therefore the study of pathology was restricted to its signs and symptoms, and anatomy to comparison only. The antagonism was so early established that no dissections of the human body or post-mortem investigation was countenanced. The argument was sincere in that if the illnesses were of demoniacal visitation the opposite remedy was obvious. This sentiment was naturally fostered and encouraged by those who profited thereby. It is a matter of intense regret when we look down the avenues of time and see their convergence to the darkest and intensest blackness of superstitious ignorance. Our regret is enhanced when we view in the light of modern knowledge that there seems to be an irresistable impulse in us at the present time to follow in the same footsteps. This is simply a survival of instinctive ideas of preservation transmitted by centuries of ancestors.

In spite of the teachings of Galen which were practically the first of a rational system of medicine, as well as the continuance of the same system by the Jews in the earlier centuries of the Christian era there was a return to the same old superstitious notions of cause of disease with also its necessary concomitant of remedy. It is useless for me to dwell any length of time on the various restrictions laid on physicians by church authorities of all isms. The fourth Lateran council in the thirteenth century forbade physicians to prescribe without first calling in an ecclesiastic for consultation (Girdner). How the Reformers believed that Satan was the cause of all illness. It is only a little more than a century ago that insanity was declared a disease by statute in France and not a posession of devils.

It was not until Vesalius in Spain risked liberty and life by informing himself by the actual dissection of the human body both of anatomical relationship and pathology. With

his knowledge given to the world the advent of medicine was slow, the obstructions still continued. It required a number of years for Harvey's circulation of the blood to be accepted and Jenner met with ridicule and disbelief in giving vaccination to the world. On the other hand it accepted with ease the various methods of cure by divine intervention, by the aid of relics, etc., by sacrifices, by journeys to special places, by the laying on of hands of kings, by mesmerism, by brasses and by tar water; today the same is evidenced by the faith cure, river Jordan water, christian science, spiritualism treatment, schlatterism, sheet of paper on the breast for sea sickness, rattlesnake rattles for headache, iron finger-ring, the potato and buckeye. This is what we are up against right now.

I do not wish to take up your time in speaking of the enormous stride made by medicine in its entirety in the last century and more especially the last fifty years. Guttenburgs invention and the discovery of the compound microscope are the keystones of this colossal structure. It would be useless to point to all of this when you are trying to protect your neighbor from himself. I say, no amount of absolute knowledge is sufficient to convince man that he must be protected from himself. And still the physician persists and again insists in spite of opposition to plant and cultivate the seeds of knowledge, so that the man may live and the doctor work the harder. It is discouraging work, my friends, for we have scarcely laid our hands on the plow. How can we lighten this labor, how can we accomplish the good we have set out to do, for do it we must? We can no more take a step backward than we could return to the ancient methods of diagnosis. The solution is evident. A revision of labor. The old maxim in "Union there is strength," cannot be better applied than to this condition. Our union is the medical society. It is the one common ground on which we meet to organize and reorganize our forces for the common good. The benefits that the individual doctor receives by such association are many and to my mind in the future will be much increased. From the professional standpoint I can say that the physician who affiliates with society work receives a greater return than by any other investment. There is so much to say on this particular phase of the subject that in a limited address of this character, I can only touch upon some of the most important. Chief of these, to my mind, is the privilege of being classed in the Blue Book of the American Medical Association soon to be issued. This will only contain the names of physicians in good standing in the local societies. This at once places him in the catalogue of the advanced and up-to-date physician, the cream of the profession. This carries with it the assurance that the physician is all that it implies, namely: he has the qualifications of the skilful and competent doctor. That he has received the benefits of medical intercourse by society work, in receiving and giving experiences and results of study from and to others. On this one line alone the benefit is inestimable. No one in his life time can have the personal knowledge of all things medical but many can increase the percentage. The dissemination of knowledge by the relation of these experiences is one of the greatest factors in society work. This, of course, is beyond all question the chief object in our affiliated labor. Its result in this particular are great. Before the days of the post graduate course it was the only school for the practitioner at which he replenished his stock of knowledge. It assumes that purpose today to a vastly greater extent than many are willing to give it credit. The interchange of experiences, results of study and observation, meeting with sharp scrutiny winnows the chaff from the wheat. It is in discussion of this character where all are earnest, that there is a concentration of energy that cannot help but result in great good to the greatest number. Aside from this the doctor who is not a member of a medical society is looked upon rather askance. A suspicion lurks that he is not quite all that he ought to be, and in the majority of instances this is true. Give me one who states that he has no need for society work, and you will generally find a physician who is unworthy of the name.

Now to the objective point that I had most in view in this paper. I trust that you will understand that now I am speaking in my advisory capacity. In order to more completely combat ignorance and perhaps selfish opposition the labor of carrying enlightenment to those who are in the dark, it becomes the duty of every physician to aid by lighting the flame of intelligence, and casting its rays into the gloom that surrounds us. And who is so well qualified for this work as one who has had his lamp replenished where knowledge is gathered together?

I believe I am safe saying that primarily we fear the penalty of the law. Its provisions being wise we soon respect it, and finally noting its good qualifications we arrive at the point of loving it. Therefore it must necessarily be that through law, the will of the majority, we must look for the eventual solution of our problem. No law, however, has stood the test of time and practice that was not demanded by the people governed by it. And just here is where the divided labor of the medical profession radiating from and to concentrated effort must make its greatest appeal.

Every physician is a twig in the bundle that the old man tried to break collectively and failed; so each one of us is a missionary working to the only one end, to conserving the best interests of our common whole. If we wish any restrictive measures, either in medicine or sanitation placed upon us, it is only by the individual endeavor of the doctor that success can be hoped for, and who is so well qualified to make this endeavor; to place advice and knowledge where it can count the most, as the member of the medical society.

I regret to note a tendency in some quarters to the sentiment of the disestablishment of all medical laws. Their chief argument is that we must be free and untrammeled to do as we please and be entirely unhampered in everything that pertains to medicine. This can be

dismissed by the statement that we are the law, that the observance of it by recognizing its rules has placed us on the eminence where we stand today. We owe it much.

If we wish to look at this subject from a mercenary standpoint the physician who is a member of medical societies most certainly enjoys advantages that those who are not do not. It is a fact that goes without fear of contradiction that the physician whether because of his attendance at society meetings does receive peculiar benefits of advertising, and in consequence thereof a greater increase of patronage, which from a monetary standpoint is not to be despised. This is legitimate advertisement. There is another point that proves my contention. Insurance companies today will not employ physicians who are not members of medical societies to make examinations, unless otherwise very highly recommended. As nominator for a number of leading insurance companies I speak from experience. Appointments to official positions frequently are based upon the question of society affiliation, and most all of you remember that but recently officials high in the federal government pledged themselves not to recommend any medical man to an official position that was not a member of the Illinois State Medical Society. These points are offered not as an inducement, but as showing the trend of the general public opinion, as between the affiliating to the non-affiliating physician.

The last but not least is the social side of society work. When I look upon this gathering I feel that it is not a compliment to the individual physician, but one to the society. We meet here in friendly intercourse and good fellowship, making acquaintances and friendships which are lasting; filling us with the sentiment of wishing to aid and assist those that we can, as well as desiring the same privileges from others. Much could be said about the fraternal spirit that I have always found prevailing in the meetings of the medical society. You all feel it, you all have it. I do not know of anything that makes me feel better than when I receive a letter and it is subscribed "Yours fraternally." There is something about that which makes me feel good all over, and I know when I read it that there is someone who looks upon me as a brother; and that is the all prevailing sentiment in society work. We **are** brothers.

Dr. J. J. Stiles, on behalf of Pontiac Medical Society, gave a hearty and enthusiastic welcome, and Dr. Wm. O. Ensign, of Rutland, responded.

Nominating committee was named as follows: Bureau County, Dr. O. J. Flint, of Princeton; De Kalb County, Dr. J. M. Kaiser, of Savannah; Grundy County, no representative; Kendall County, no representative; LaSalle County, Dr. J. F. Dicus, of Streator; Lee County, Dr. E. S. Murphy, of Dixon; Livingston County, Dr. Marshall, of Pontiac; Marshall County, no representative; Putnam County, no representative; Whiteside County, no representative; Woodford County, Dr. Knoblanch, of Metamora.

The Secretary reported that Dr. J. Wallace Whitmire, of Forrest, who joined the Association in 1877, and was dropped in 1899 for nonpayment of dues, had applied for readmission, and the Secretary accepted $7.00, he having paid $18.00 before being dropped. It was moved and carried that the doctor be restored to membership and be made a life member.

The special committee named to report on the letter from the State Board of Health relative to consumption, reported with the the following resolution, which was adopted unanimously:

"Resolved, That we congratulate the Illinois State Board of Health upon the magnificent work they are doing in the present crusade against tuberculosis. We do especially commend the circular which they have issued on consumption, and recommend the members of this Society to assist in its general distribution."

Four Instructive Cases of Emergency Appendicitis.

Dr. E. E. Perisho: During the past few years the subject of appendicitis has been so thoroughly discussed in this and all other societies ,that I feel like offering an apology for approaching such a seemingly worn out subject. For at first thought there is but little more to learn or say concerning it, and we should now all be of one opinion, as to the proper management of a given case; but such is far from being true, as I know of no disease in which there is more diversity of opinion as to treatment and none that is more puzzling as to prognosis.

A careful review of the literature and clinical experience teaches us there has been but little learned, and what we have learned is subject to many variations. As I know of no disease in which the clinical course and symptoms (as we have learned to read them) tells us so little as to the true pathological condition present, and none which more often surprises the operating surgeon than does appendicitis, for with all our study, we have absolutely no positive way of predicting the actual condition within the abdomen except by the laparotomy.

The following cases taken from a series of cases occurring in my practice during the past few years, fully illustrate the above, and that a seemingly mild case may be a very serious one.

Case 1. Mr. Joseph M., aged 16, a healthy rugged farm boy, who had never been sick, came to the office March 18th, 1899, complaining of being sick at his stomach and of pains in the bowels. On examination he was found to be tender over McBurney's point. Pulse and temperature normal. The bowels were unloaded, and rest with abstinence of food was advised until all soreness disappeared, which was in about three days. I saw him only the one time during the attack.

Second Attack, October 24, 1902. Three and one-half years later he was taken suddenly sick during the night with vomiting and severe pains in his stomach and bowels. All continued severe for about eighteen hours, when the pains became localized in the right iliac region, and

vomiting ceased. Pulse 100, temperature 100. Third day temperature 101, pulse 110. The area of tenderness had spread all over the abdomen with tympanites. The peritonitis continued for two weeks.

Operation was advised in the beginning of the attack, but refused unless it was thought to be absolutely necessary, and again advised and insisted on after it had subsided, but was still refused, especially by his mother.

On January 1st, patient returned to school at Ottawa, and remained in good health until 5 p. m. January 20th, when he was taken with a severe cramp in his bowels and a free movement. Cramps then subsided, patient ate a fair supper, feeling well until one-half hour after supper, when cramps returned with increased severity, and continued, but were more in his right side.

Being suspicious of another attack, he took the 7 p. m. train for Streator. I saw him at his home at 9:30, and found him suffering very severe crampy pains in his right side, and was very tender to pressure. Temperature 99, pulse 100. Operation was strongly urged, consent was delayed until morning, trusting he would be better by that time. At 7 a. m. temperature 100, pulse 108. The tenderness had extended to the median line. Operation was consented to and performed that evening at 10:30 o'clock, about thirty hours from the beginning of the attack.

On opening the abdomen, this, creamy pus poured out freely. The appendix was found adherent to the posterior wall and contained a perforated abscess. Because of the location and adhesion it was not removed, but drained with iodoform strip tampons. Drainage was very free for two weeks, and in five weeks recovery was complete.

The operation was advised and urged, not that we knew there was an abscess or any other special danger present, but only because, having had two attacks, we feared repeated attacks, and that this one might terminate fatally, and thought it useless to take chances on it. As the patient had only been sick a few hours, we felt sure we could do an early operation, and head off bad complications, and promise a good prognosis; but was very much surprised to find such advanced pathological conditions present.

Case No. 2. Mr. G. B., age 31, an American farmer, always healthy. November 16th 1900, came in to my office on horseback, a distance of four miles, complaining of nausea and pains in his stomach and bowels. On examination he was found to be tender over McBurneys point. Pulse and temperature normal. Catarrhal appendicitis was diagnosed and treatment advised, all symptoms subsided in three days with no further troubles until January 10th. He returned to the office complaining of the same trouble, except pains and tenderness were more pronounced than before. Temperature 99, pulse 90. This attack subsided in five days, but he would have repeated attacks about every six to eight months, but none severe enough to cause him to go to bed.

After the second attack I advised an operation, but each time he would decline, saying he would wait until the next attack, trusting he would have no more. January 29th, 1903, he was taken very sick (during the night, this being his sixth attack) with vomiting and severe pains in his stomach and bowels, the pains with tenderness became localized in his right side on the second day; temperature 101, pulse 110. Severe pains and all acute symptoms lasted four days, gradually subsiding by the tenth day; except he continued to have a temperature of 99 to 99½ for two weeks, when he was earnestly requested to have appendix removed, which he agreed to do.

On opening the abdomen, everything seemed normal except the appendix, which was three and one-half (3½) inches long, normal in appearance and size at the proximal end and for about one inch back, but the distal end was red and swollen, and balooned out to a club shape, being about the size of the little finger. The appendix was removed in the usual way, and when split open to examine, the balooned distal end contained about a drachm of thick creamy pus; and an ulcer about the size of a dime in the mucous lining, which had almost eaten through the entire wall, thus making it only a question of a short time until there would have been a perforation and a liberation of the pus.

Patient made a prompt recovery, left the hospital on the twelfth day.

Case 3. Mr. H. M., age 29, a healthy farmer, had never been sick. April 27th, 1899, he came to the office saying he had been having cramps in his stomach and bowels and a loss of appetite with slight nausea for two days. On examination he had a temperature of 99, pulse 86, and slight tenderness on pressure over appendix. He was advised to go home and keep quiet, and abstain from foods until all tenderness disappeared, which was in three days, after which he continued perfectly well for six months, or until the second attack.

Second Attack. October 9th. He husked corn all day, feeling well. At 4 P. M. was taken with a very severe sharp cramp in his bowels and vomiting, bowels moved three times during the next two hours. I saw him at 6 P. M. and found him walking the floor, bent over holding his hands on his abdomen, and crying out with pain. The pains were general, with no special tenderness. Temperature normal. He was given one-fourth of a grain of morphine hypodermically, and four grains of calomel by the mouth to be followed by one-half ounce of magnesii sul. in four hours. Cramps continued very severe, causing the patient to be very restless all night, in spite of two repeated one-fourth grain doses of morphine every four hours.

At 7 o'clock the next morning a high colon enema was given with no results. Cathartics and enemas were pushed vigorously during the next twenty-four hours, with no results. At 4 P. M. or twenty-four hours from the beginning the bowels were tympanitic, but no tenderness

or localized pains. Temperature 100, pulse 110. Patient resting better, but still disturbed with pains. He was given no more morphine after the first night. The following morning, or thirty-six hours from the beginning, his temperature was 101, pulse 110, bowels very tympanitic. The pains were still of a general heavy aching nature, and with no local tenderness. At 6 A. M. he had a vomiting spell which lasted about a half an hour, and vomited fecal matter, after which he felt easier the remainder of the day.

Operation was advised and done as soon as arrangements could be made, which was that evening at 10 o'clock, or about fifty hours from the beginning. At that time the bowels were very much distended. Pulse very weak and fast, patient stupid and had the appearance of a dying man.

On opening the abdomen, the small bowels were of a dark slate color and very much distended, making them very hard to keep in the abdomen while searching for the seat of trouble. The appendix was found to be very short and stubby and sloughing on the end and adherent to a kink of the small intestine by a fibrinous exudative band which bound it down producing strangulation and obstruction. The band and adhesions were removed, but the patient did not rally from the anesthesia.

From the appearance of the appendix and the bowels, it was very evident that during the first mild attack the end of the appendix had sloughed and became adherent to the neighboring bowel, and when the second attack came on, the acute congestion and swelling soon produced the strangulation, or in other words the first attack kindled the fire ready for the match of the second.

This case is cited to illustrate that a very mild attack may leave the appendix and neighboring organs seriously involved without any external evidence of its presence.

The symptoms of the first attack were so very mild and short in duration, there was some question whether or not it was really appendicitis. The patient and his family being afraid of appendicitis, asked if he should not be operated on to prevent future trouble, but as it was so mild, I did not think it necessary and advised them to wait as he might never have another attack, and if he did, he could be operated on early in the beginning of the trouble, almost as safely and thereby avoid an unnecessary operation; but to our sad disappointment the second attack started in so abruptly, and was so complicated, that it was impossible to make a diagnosis for thirty-six hours, and it was then too late to save life.

As an explanation I wish to say my excuse for giving the three doses of morphine was that the patient was so very restless and the family so alarmed, it seemed necessary and admissable to give some relief. Of recent years I have learned to consider morphine a very dangerous drug in this disease, and that it should never be given.

Case 4. The following case was operated on and reported in the October Illinois State Medical Journal by Dr. Bayard Holmes of Chicago. (see page 471, Oct. Number.)

Mrs. S. G., age 45, a well proportioned and healthy woman, and a mother of five children. Friday noon, September 2, 1904, she felt a slight distress through her bowels; being mild she gave it no attention, and drove to Streator, a distance of six miles, and did her weeks shopping, returned home, ate a fair supper, and went to bed feeling well, except a slight distress through her bowels. About nine o'clock the pains increased, causing her to awake from sleep several times during the forepart of the night. By two o'clock A. M. they became very severe and I saw her at 3 A. M. and found her vomiting and suffering severe crampy pains all through her bowels, with slight tenderness over the region of the appendix. Temperature 99, pulse 90. An irreducible inguinal hernia was found in the right side, about the size of a walnut, but was not tender, patient said it had been there for years, and never caused her any trouble. I saw her again at 10 A. M., and found her still vomiting, and suffering severe pains. Bowels had been moved freely by calomel and an enema. Temperature 100. Local tenderness more marked and the pains were beginning to be more severe in right side.

At 1 P. M., a hard chill. 6 P. M., temperature 101, pulse 110. Pains very severe, and in right iliac region and tenderness very marked. Vomiting had ceased. Sunday 8 A. M. temperature 103, pulse 120, did not sleep any all night, pains confined to right side and groin. The region of the appendix was exceedingly tender and the right rectus muscle very tense. The hernia at this time was very tender to pressure.

Operation was advised and done that evening at 10 o'clock. As soon as the peritoneum was opened, thin creamy pus poured out. In searching for the appendix, a thick indurated mass covered with pus was found, which consisted of a tense band about the size of the index finger across the iliac region, and firmly fixed in the internal ring. By manipulations over the hernia with tension and torsion upon this band, a small omental hernia, the size of a walnut was dislodged from the sac, and was brought into the wound. It was black, hard and covered with fibrous flakes and pus. The band itself which was of attenuated and sclerotic omental tissue, was uninfected and apparently free from any inflammatory process. The band was ligated off from the general omentum, and the contents cut away. Under this was a gangrenous sloughing appendix, which was removed in the ordinary way.

On account of the extensive effusion, iodoform strip gauze tampons were packed in the iliocecal fossa, and the pelvic fossa, into which the hernia sack opened. The iliocecal fossa was drained with a tampon of plain gauze. The ends of all the strips hung out of the wound about six inches, which was left for six days, when the gauze was gradually removed and repacked until the flow of pus ceased, which was about five weeks when recovery was complete.

In Dr. Holmes' report he says the special point of interest in this case is the infection of

the omental and partially strangulated hernia from a rather distant appendicitis, and a peri-appendicular peritonitis without evidence of infection of the proximal portion of the omentum. This infection must have crept down on the omental peritoneum into the hernial sac, where it found tissue of diminished vital resistance, or it must have been carried into the sac through the parietal or through the omental lymphatics. In any case, it is very suggestive of the danger which lurks in the cyanotic tissue of a hernia, volvulus, an ovarian tumor or other isolated tissue. It further calls attention to one of the almost innumerable sources of error in diagnosis of disease in this region.

The above cases plainly illustrate that to treat a case of appendicitis medically, and to be able to say just when an operation is necessary to save life is no small task, and for that reason I never feel satisfied to trust a patient's life and my reputation to the medical treatment, unless it is a very mild attack.

According to statistics, about 93 per cent of all first attacks and 86 per cent of second attacks treated other than surgically, recover. Experience also teaches us a large per cent of first attacks, especially when there has been much evidence of inflammation, and almost all the second attacks are followed by repeated attacks of increasing severity until death or an appendectomy. When we are successful in watching our patient through an attack, we can not consider him cured until he has been operated on. Thus it does not seem to me to be a good practice to take chances on a mortality of 7 per cent in first and 20 per cent or more in repeated attacks, when surgery gives us a permanent cure with a mortality of only 1 per cent of loss.

The first and most important thing to do on being called to see a case, is to make an early diagnosis, which can usually be done during the first twenty-four hours. During the next twenty-four to thirty hours we should be able to decide as to the severity of the attack, and advise surgical measures when indicated before the patient passes into a dangerous and hopeless condition.

I like the words of Dr. Bonney, of Denver. In all cases when operation is advocated, it should be made clear, not that the operation is absolutely necessary for recovery, but that the chances for recovery are greater with than without it, and I would add the cure permanent.

In doubtful cases it must be emphasized that the dangers of the operation **per se** are practically **nil** and that the dangers of delay are terrible.

The discussion of Dr. Perisho's paper was taken up by Drs. Percy and Harris, Dr. Percy reporting on work done in Philadelphia, where all they do is to open and put in gauze for drainage and leave things alone.

Dr. Harris says he always removes the appendix at primary operation, if it can be found.

Dr. J. F. Percy, of Galesburg, in his paper on "The Successful Treatment of Lupus by the Hollander Apparatus; also Port Wine Marks," reported, after describing the instrument and its use, several of the cases which he had successfully treated, all of which proved of much interest to all present.

The temperature at point of instrument is about 600° F., thus cooking the tissues. One treatment suffices in Lupus, but Port Wine Marks generally require two, three or four.

Never apply heat the second time after yellowish white line appears, as it will produce scarring. In operating about or near the nose, be sure and close nostrils, and in working about the eye lids, cover the eyes with wet cotton.

Discussion by Dr. Kaiser, who claims good results in the use of chemically pure nitric acid and without a scar.

Dr. Lochey claimed to have cured one case with 32 candle power light. Dr. C. D. Chalfant uses nitric acid or zinc.

Dr. Percy, in his closing remarks and in answer to questions, stated he made the application over sloughing and infiltrated areas and over the entire area at one sitting, which only requires a few moments. Has never tried the treatment in angiomatous growths, but used Wyeth's treatment in boiling hot water injection.

Dr. Pettit reported on the modern treatment of tuberculosis, as shown by the Ottawa Tent Colony. He claims medical treatment is nil. By the Tent treatment, which is nutrition and fresh air, with its application, he claims for incipient stages results good; for second stage, not so good; for third stage, results nil. Therefore, his suggestion to the physicians were not to send advanced cases. None only those whose digestion is good and who are able to attend to themselves.

The reports show a gain in weight from ¼ of a pound a day to as high as 1 pound a day for ten days.

Discussion by Dr. Wm. O. Ensign, who claims this is no new treatment, but rather the old treatment scientifically handled.

C. D. Chalfant, E. H. Fitzpatrick, J. D. Scoullar and Bayard Holmes, who claim patients are helpless and that this is community disease, and what we need is preventative treatment, viz: Bread and Butter.

He claims the homes for the homeless and orphans are a menace to the public, being hotbeds for consumption.

The application of Dr. John Deans Scoullar, Jr., of Pontiac, was read and referred to the Board of Censors.

The Board of Censors reported favorably upon the applications of Drs. William E. Ranney Smith, of Grandridge, Edward D. Kilbourn, of Ancona, and John Henry Veatch, of Cornell. The application of Dr. Veatch also included his signature to Section 3 of Article VI, of the Constitution. It was moved and carried that the report be adopted and that the Secretary cast the ballot of the Association for the three doctors as members of the Association, which he did, and they were accordingly declared elected and their names enrolled.

Dr. M. L. Harris, of Chicago, gave an exceedingly interesting paper on "The Cure of Inguinal Hernia," and illustrated the operation

in detail upon a clever device. Dr. Harris' paper will be printed in full in the March issue of the Illinois Medical Journal. It was received too late to be published in this issue. He claims it a delusion to think that direct inquinal hernia in adults can be cured by a truss. Infants may and ought to be cured by the use of the bandage, and as they grow older chances are lessened. Should never allow the Hernia to descend after having been replaced once. The risk where operations are made is ½ of 1 per cent, while the deaths without operation are 2½.

Dr. Harris has done away with silk and wire and uses aluminum bronzed wire.

Discussion by Drs. Holmes E. P. Cook and Harris, to close.

Inasmuch as Dr. Harris came to deliver us so excellent a paper, and without remuneration, it was unanimously moved and carried that he be made an honorary member of the Association.

Moved and carried that the Nominating Committee meet in the Phoenix Hotel at close of evening exercises.

Adjourned, to meet at 6:30 at the Masonic Hall, where a banquet, wanting in nothing, was spread by the medical profession of Pontiac for the members of the Association and invited guests, to which all present proceeded to show their sincere appreciation of by heartily partaking of the numerous courses, after which Dr. John Ross, of Pontiac, acting as toastmaster, called upon several who responded to toasts, an enjoyable hour was thus spent.

Adjourned at 9:45.

At 9:50 p. m., in the Masonic Hall, Dr. Wm. O. Ensign, First Vice-President, called the meeting to order, and introduced E. W. Weis, who gave the President's address, "The Physician and the Medical Society," after which Dr. Weis resumed the chair and introduced Dr. Bayard Holmes, of Chicago, who gave a paper (see page 137 this Journal) which was highly appreciated, and Dr. Ensign moved a vote of thanks to Dr. Holmes, which was carried unanimously.

Adjourned, to meet at 8:30 a. m., Wednesday, Dec. 7, 1904.

Dec. 7, 1904. Meeting called to order at 8:53 a. m., by the President. The Board of Censors reported favorably upon the application of John D. Scouller, Jr., of Pontiac. Moved and carried that the Secretary be instructed to cast the ballot of the Association, which was done, and Dr. J. D. Scouller, Jr., declared a member of the Association.

Moved by Dr. Ensign, seconded by Dr. Curry, that the Secretary be instructed to notify Dr. Rohrabaugh and Dr. Rabe that charges of unprofessional conduct will be preferred against them and action taken at our next regular meeting. Carried.

Moved and carried, that the Board of Censors be instructed to investigate and prepare the charges against Drs. Rohrabaugh and Rabe, and place copies in the hands of the Secretary in time to notify them at least three months before our next meeting.

Report of Nominating Committee.

For President, Wm. O. Ensign, Rutland.

For First Vice-President, J. J. Pearson, Pontiac.

For Second Vice-President, E. P. Cook, Mendota.

For Secretary and Treasurer, Geo. A. Dicus, Streator.

Board of Censors—F. A. Turner, Sandwich, chairman; J. A. Marshall, Pontiac; J. M. Kaiser, Somonauk; J. I. Knoblanch, Metamora; Roy Sexton, Streator, Ill.

Committee on Necrology and Biology—P. M. Bourke, LaSalle; E. B. Owens, Dixon; Jos. Tweddele, Washburn; J. F. Dicus, Streator; E. W. Weis.

Place of meeting to be selected by secretary.

Moved and carried report be adopted as above.

The secretary reported Drs. John C. Corbus, Jr., of Mendota; John R. Hoffman, of 206 Washington st., Chicago; John J. Hammond, of Malden; James A. Kleinsmid, of Lay Grove; Wm. C. Mason, of Walnut; Chas. A. Palmer, of Princeton; Vern A. Peterson, of Arlington; E. E. Rohrabaugh, of Chicago and Solomon C. White, of Somonauk, as being delinquent on dues for five consecutive years and according to article 6, section 4, should be dropped. It was moved and carried that the secretary be instructed to drop the names from the roll.

The applications of Drs. Norman Pearson, of Pontiac and Michael M. Welsh, of Odell, were received, read and referred to Board of Censors, who reported favorably. Report adopted and secretary cast the ballot of the association and Drs. Pearson and Welsh were declared elected.

Dr. Murphy of Dixon read a paper on **Treatment of Eclampsia.** To produce catharsis comp po. jalap 3j if patient is conscious, otherwise 3 or 4 drops of croton oil on base of tongue and repeat in 8 hours if necessary.

Surgical anaesthesia and delivers at earliest possible moment. Discussion by Drs. John Ross who prefers ⅙ gr. elaterine every half hour until free evacuation, to croton oil. Pearson, Colbourne, Turner, Curry, Ensign and Murphy to close.

Moved and carried that any visiting physicians be invited to take part in discussion of papers.

Dr. Colbourne read a paper on **Rheumatism.**

Moved and carried that all papers be read and discussion postponed until close.

Dr. Curry read a paper on **Treatment of Compound Fractures.**

Moved and carried that the paper of Dr. Hendrichs on the **Medical Value of Drugs** which had been sent to the secretary, be read by him in abstract, which was done.

The discussion of the three papers, viz.: of Drs. Colbourne, Curry and Hendrichs was then discussed by Drs. Fitzgerald, Weiss (who claim results can be had from salicylates if you use Merk's preparations and podophylin for cathartic). Ensign, Colbourne and Curry to close.

The secretary reported in his hands a paper from Dr. Rabe, which the president refused to consider and it was passed.

The following resolution by Dr. Ensign was presented and unanimously adopted:

Resolved, That the members of the North Central Illinois Medical Association assembled in its thirty-first annual meeting at Pontiac, Illinois, December 6th and 7th, 1904, do most sincerely extend their thanks to the members of the medical profession of the city named and of Livingston County for their hospitable entertainment so generously provided for the occasion; that to the citizens of Pontiac, its public press and the city officials who have contributed their presence, their influence and a pleasant and agreeable place of meeting, they would give assurances of their hearty appreciation, and that the visiting profession will carry with them to their towns most happy recollections of the cordial hospitality of their generous hosts, who have so unitedly and successfully contributed to the welfare of their visitors and a profitable meeting of the association.

Dr. Ensign moved that the secretary place $300.00 in bank security at best rate of interest he can obtain. Carried. Dr. Ensign asked for an expression from the association in regard to this journal being moved to Chicago. After some discussion Dr. John Ross presented the following resolution which was unanimously adopted.

Be it Resolved, That the members of the North Central Illinois Medical Association are satisfied with the present management of the Illinois State Medical Journal.

Moved and carried that the secretary be instructed to place a copy of this resolution in the hands of the State Secretary in time for his use at the next meeting of the council.

Dr. Ensign moved a vote of thanks to Dr. Weis for the able way in which he had conducted the business of the association, etc., during his term of office. Carried.

This now completing the program, all having responded but Drs. Hirsch, of LaSalle; Pike, of Ottawa and Flint, of Princeton who were not present neither tendered any excuse.

Drs. Ross and Marshall were asked by the retiring president to conduct the president-elect, Dr. Wm. O. Ensign, of Rutland to the chair.

After some brief remarks the association adjourned to meet December 5 and 6, 1905.

Geo. A. Dicus, Secretary.

Abstract.

Dr. Percy, of Galesburg, read a paper in which he detailed his experiences with the **Hollander Supra Heated Air Apparatus,** in the treatment of **Lupus and Port Wine Marks.**

The doctor first spoke of the difficulties of permanently curing Lupus, and especially so from the use of pyrogallic and nitric acids. That the results from these agents was rarely permanent.

The X-Ray was spoken of, and commended as of value; but the time required made it very tedious as well as expensive, and unfortunately the results were not uniform.

In the International Clinics of a few years ago, Hollander of Berlin, gives his method of curing lupus by the use of a modified Bunsen Burner, from which air at a temperature of about 600° F. is sprayed all over the infected tissues. The patient is anesthetized with chloroform, and the air applied with the nozzle of the apparatus held about half to one inch from the surface. A Pacquelin cautery bulb is used to force the air from the hot air apparatus. It is played upon the parts involved until they turn a sickly yellow. When the alae of the nose is involved, the nostrils are gently closed with an instrument forceps, such as is used to remove instruments from boiling water. When the eyelids are to be treated, their margins are held together by moistened and pressed cotton held down by the instrument forceps. No harm has come from treatments applied about the eyelids in this way. The author of the paper had had the same excellent results as those reported by Hollander. The great advantage of the treatment was that it rarely had to be applied more than once, unless the case was a very extensive one. This was of the greatest advantage, and the results were almost certain to be permanent, something that could not be urged as true of any other method. The doctor then reported five cases, in all of which the results were ideal.

A report was then made of the use of this treatment in the destruction of port wine marks, and photographs of cases treated, shown. In this latter class of cases, the treatment had to be repeated often four or five times; but after each application, the fading out of the stain was pronounced. In the angeiomatous form of naevus, the treatment was not applicable. The after treatment in both conditions, was that of a burn of the first degree.

In the discussion that followed the reading of the doctor's paper, the question was asked if the treatment was applied to sloughing areas of lupus. This was answered in the affirmative as was also the question as to whether the whole surface involved was treated by the application of the supra-heated air.

BRAINERD DISTRICT MEDICAL SOCIETY.

The Brainerd District Medical Society held its 111th meeting in the parlors of the Commercial hotel, at Mason City, October 27, 1904, with President Irving Newcomer of Petersburg, in the chair.

The following applications were read and applicants taken into full membership: A. L. Cook, M. D., Mason City; H. M. Van Hook, M. D., Mt. Pulaski; W. S. Taylor, M. D., Tallula; John Deal, M. D., Riverton; J. H. Hill, M. D., Mechanicsburg; B. F. Stults, M. D., New Holland; Edwin A. Weimer, M. D., Pekin; W. E. Guthrie, Bloomington; J. W. Fulwiler, M. D., Bloomington; H. W. Elder, M. D., Bloomington; C. M. Noble, M. D., BloomingtonR. A. Noble, M. D., Bloomington; A. W. Meyer, M. D., Bloomington; C. E. Chapman, Bloomington; J. E. Kunkler, M. D., Bloomington; Lee Smith, M. D., Blooming-

ton; O. M. Rhodes, M. D., Bloomington; T. W. Bath, M. D., Bloomington; J. B. Taylor, M. D., Bloomington.

Upon the unanimous vote of the society article XII of the Constitution became section 17 of the By-Laws.

Amendment to the Constitution providing for a Board of Trustees was unanimously adopted.

Upon motion Irving Newcomer of Petersburg was instructed to secure a marker for Dr. Harris grave, the marker not to exceed $15.00.

The society unanimously endorsed the action of the Illinois State Board of Health in the crusade against consumption.

At the afternoon session, B. W. Hole of Tallula, gave a very interesting paper on **A Case of Fracture of Eleventh and Twelfth Dorsal Vertebra,** which is as follows:

Fracture of the Dorsal Vertebrae.

Berton W. Hole, M. D., Tallula: Fracture of the spine in the dorsal region is of rare occurrence, about three and one-half per cent of all fractures.

Fracture of the cervical and dorsal region are of equal frequency. When the cervical region is so injured the prognosis is more grave than injury in the dorsal region.

The lumbar region is least frequently so injured and the percentage of recoveries is greater.

For purposes of diagnosis and prognosis, McDonald divides the spine into five sections from below upward.

First: The three lower lumbar vertebrae, injury to which is not common and recovery the rule.

Second: That part between the second lumbar and tenth dorsal, in injury to this portion of the spine the lumbar and sacral plexus of nerves is involved, with a paralysis of the lower extremities, bowels and bladder, and bed sores are an early and inevitable result.

Third: That portion between the tenth dorsal and seventh cervical, when the injury is in this region, there is paralysis of the abdominal muscles, labored respiratory movements, and pneumonia and hypostatic congestion are frequent complications.

Fourth: The third, fourth, fifth, sixth and seventh cervical vertebrae; following such injury the whole of the brachial plexus is involved, with complete paralysis of the arms, the breathing is much interfered with especially the expiratory act, voice weak, or lost altogether, temperature may be abnormally high; the fifth and sixth vertebrae are the ones in this region most usually injured.

Fifth: The atlas and axis, fracture of either of these is almost surely fatal, patient may live from a few hours to two weeks.

The mortality in civil practice of all cases of injury to the spine, fracture or dislocation, or both, is seventy-eight per cent.

The causes of the injury, especially in the dorsal region, are first forcible flexion; the head and shoulders being forced forward on the hips or vice versa. Second falls from almost any height when patient falls on head or feet. Third direct injury, as a blow with some heavy object, gun shot wounds, etc.

Diagnosis. The diagnosis is as a rule easy, as there is in the majority of cases some deformity of the spine at the point of injury. When there is no deformity, the diagnosis is to be made by carefully mapping out the area of motor paralysis and tracing the nerves that supply the paralyzed region to the spine, thus locating the point of injury.

Prognosis: The prognosis is always grave and should be guarded, even in the apparently most favorable cases.

Treatment: The treatment as laid down by different authorities, differs very materially, with a very few exceptions the writers advise, an expectant plan of treatment, and advise postponing operative procedure for a longer or shorter time, to see if nature will not establish a part at least of the lost function. There are a few surgeons however that advise an immediate operation, a removal of the laminae of the fractured or dislocated vertebrae, thus relieving at once the pressure on the cord. Among this number Dr. Paul F. Eve, of Nashville, Tenn., Dr. John C. Munro of Boston, and Dr. Carl E. Black of Jacksonville, Ill., who has tabulated a great number of cases besides the ones in his own practice, and I think shows conclusively that the operative treatment, done as soon as possible greatly enhances the chances of life and permanent recovery. When the patient so injured is first seen a small amount of manipulative procedure is justifiable, the shoulders being fixed traction on the legs at the same time some pressure at the point of injury; it is well to warn the family and friends before instituting any procedure that the patient might suddenly die during or after the manipulation. After the operation patient should be placed in a plaster cast, on an incline, some advise swinging the patient from the shoulders, thus preventing pressure on the bony prominences, and lessening the probability of bed sores.

The case I have to report, is of fracture of the eleventh and twelfth dorsal vertebrae, involving the laminae and probably not the bodies of the vertebrae, in one-half the cases of spinal fracture the bodies of the vertebrae are not injured.

This injury according to McDonald is in the location second in frequency of injury, and third in mortality and that two-thirds of the fatal cases die during the first month.

The patient was a male twenty-two years of age, five feet eight inches in height, weighing about one hundred fifty pounds; not an ounce of surplus flesh, and perfectly developed muscularly accustomed to hard labor each day on the farm.

The personal and family history was the best.

June fourth while in a tree, probably twenty feet from the ground, he lost his balance and fell, as there were no bruises about the body any place, we judge he must have fallen on his feet; he was picked up in a few minutes in an unconscious condition, from which he rallied in a short time, and as he had no use of his

legs at all, the word that came to me was that both of his legs were broken.

I saw him about two hours after the accident, he was conscious but rather stupid, pulse 80, respiration 15, temperature normal; complained of pain in his back that was his only complaint. There had been a little nausea, the pupils were normal, and reacted normally to light, the abdominal muscles were rigid, apparently in a state of tonic contraction. There was complete paralysis, both sensory and motor, of all the body below a line drawn from the eleventh dorsal vertebrae both sides to the anterior superior spinous processes of the ilium, then across the abdomen, there was an abolition of all reflexes.

The deformity at the point of injury was as if one vertebrae had been pushed forward and allowed the spine of the beneath it to project one-third of an inch or more, the point of injury was painful to the touch.

A catheter was passed, but no urine obtained; very little treatment was instituted at this visit. I made a little traction on the legs, the shoulders being held by an assistant, he was then put to bed on a slight incline and the attendant was instructed to pull him up in bed by the shoulders occasionally.

The next day I took Dr. Taylor of Tallula with me, and we did a little more traction and manipulating hoping to be able to reduce the, then supposed, dislocation, but to no purpose; the area of paralysis was remapped and found to be as above stated, there was at this time no urine found in the bladder and of course no bowel action.

The patient was placed on a well padded inclined bed and the shoulders fixed, but the fixing of the shoulders proved to be so uncomfortable that he was released the next day.

We used all means possible to prevent pressure on the bony prominences, and thus prevent the formation of bed sores.

The third day there was about a pint of urine passed on the insertion of the catheter; the catheter was directed used every four hours under the strictest possible antiseptic precautions, and cathartics were given. For the first three or four days there was a slight rise in temperature, and the pulse was about one hundred, after that the temperature became normal, and the pulse was about sixty until the beginning of the fifth week after the occurrence of the injury, when it increased in rate, the respiration during the above period averaged about fifteen to the minute.

The fifth day there was noticed in the lumbar region the first appearance of a bed sore, skin dark about three or four inches in area, and in four days more there had formed a gangrenous slough four inches in diameter, the peculiar thing to me was the almost malignant rapidity of the formation of the bed sore, and its involvment of the deeper structures so soon.

At this time began to insist on operation, and finally got the consent of the patient and family to have a laminectomy if it could be done at the home of the patient, accordingly arrangements were made with Dr. C. E. Black of Jacksonville, and on June 14th, ten days after the inception of the injury a laminectomy of the eleventh and twelfth dorsal vertebrae was done, there was several pieces of bone removed and the entire transverse processes of the above mentioned vertebrae, the patient was placed in a plaster cast and in the bed on an incline.

The muscles of the legs were already much atrophied, and flabby; the sore in the lumbar region had cast off its slough and exposed the spinal and gluteal muscles.

The pressure on the cord was by the operation entirely relieved, the dura was not opened, the operation wound healed promptly by first intention.

For four weeks after the operation there was an entire cessation of any aggravation of any of the symptoms, and it really looked as if there was some improvement, the line of anasthesia was a little lower down on the abdomen, but never at any time was there any control over the sphincters, or any knowledge of the action of the bowels or bladder; but the appetite and digestion was good and the patient cheerful the second week after operation was moved three miles from his home to that of his brother, without any inconvenience or suffering.

At the beginning of the fifth week all the symptoms became aggravated, the sore in the lumbar region became active again involving the spinal and gluteal muscles, baring the spines of the lumbar vertebrae. August second, fifty-nine days after the occurrence of the injury, the patient died from exhaustion and septic infection from the bed sore and a cystitis.

My reasons for bringing this case before the society, are, first, on account of the rare occurrence of such an injury, second because any practitioner may at any time be called upon to treat just such an injury, and as there is so much difference of opinion as to treatment, if one takes the advice which he will get a preponderance of from his text books he will delay operation until the complications arising will destroy his patient, and counteract all the good that an operation can do and studying this case as I had the opportunity of doing, I believe that an operation the second day instead of the tenth would have greatly enhanced the prospects of recovery, and I believe the history of the case after the operation justifies me in that belief, so in all cases of injury to the spine, unless the injury be very trivial indeed, it is our duty to insist on immediate operation, before the atrophy of the muscles, the further loss of function of the cord from disuse as well as the pressure the formation of bed sores, and an almost inevitable cystitis tends to complicate the case and hasten the destruction of the patient.

The following is a very concise and instructive paper on **The Mongolian Idiot,** presented by C. R. Spicer of Springfield:

The Mongolian Idiot.

C. R. Spicer, M. D., Springfield: This subject has been chosen, not because of its importance in every day practice, but because, oc-

curring rarely, it is likely to be unrecognized if the examiner's attention has not been especially called to it.

On the other hand it is so plain and characteristic that once seen it is never to be forgotten.

Generally speaking, imbecility in infancy and early childhood is very puzzling and difficult to classify; but this class is quite distinct.

This class of idiots is not really so small; but comparatively little has been written on the subject because the condition has not been recognized until recent years. In his edition of 1895 Rotch does not mention the subject nor does Holt in his of 1900. It is not so rare in Europe, however, as Shuttleworth states that this class forms five per cent of all imbeciles. I have notes on twenty-three cases observed in the hospitals of Edinburg, London and Vienna and one, from which the accompanying photograph was taken, which occurred in the practice of Dr. Hopkins of Springfield. This child was born at term and was the youngest of five all of which were normally bright. The parents were German and not related before marriage. The mother's health was good during the puerperium. The case was typical and so well represents the class as to need no special description. Unfortunately no photograph was taken for clinical purposes, the present one failing to show the characteristic flat occiput and spadelike hands. The child died of diffuse bronchitis when one year old.

The term Mongolian does not imply that these individuals are more common among the Mongolian race; in fact it has been shown not to be so, but to the marked resemblance in appearance. This resemblance is chiefly in the shape of the head and oblique position of the eyes.

These children present a very striking and odd appearance. The head and all the features are more rounded than usual.

Instead of the ordinary occipital protuberance the back of the head is nearly vertical, making the occipito-frontal diameter abnormally short while the temporal diameter is relatively long. The hair is scanty, straight and fine.

The skin is of a clear pink and the cheeks red. The eyes are characteristic, the palpebral fissure being oblique and with a reduplication of the epicanthic fold. The bridge of the nose is depressed, the child snuffling more or less and breathing through the mouth. Adenoids were present in 35% of the cases observed. The tongue is abnormally large and usually protrudes and in early childhood becomes fissured, presenting a hacked appearance. Thompson, of Edinburg, found this condition present in eleven consecutive cases over four years of age, but has not seen it under two. The vault of the mouth is usually high. The bones are relatively small and the joints lax so that the foot can readily be placed behind the head. The hand is short and spadelike, the little finger being relatively short and sharply curved toward the ring-finger.

Development is much retarded in these cases, a child of a year often appearing not more than eight months. Dentition is delayed, the teeth often not erupting before the third or four year. The voice is guttural and indistinct. These children show many peculiar traits and interesting dispositions. They are affectionate and jealous, their jealousy sometimes rendering them unsafe companions for other children. Otherwise they are cheerful and goodnatured and they are usually clean in their habits. They are fond of music and take an interest in toys, domestic animals and such things as interest normal children.

In the two postmortems which I have seen on Mongol imbeciles the medulla was small and the cerebellum quite small, the cerebral convolutions in both instances being apparently normal. In one the vomer protruded into the nasopharynx. The apices of the lungs of one of the bodies were pneumonic, the bronchial glands were large and caseated, and the base of the brain studded with tubercles. In examining the records in five autopsies on Mongols, Muir of Edinburg found the medulla and cerebellum undersized in three, while the others were apparently normal. The blood count in three cases showed nothing unusual.

The etiology in this class of imbeciles is by no means clear. Heredity seems to play no part whatever. I know of but one instance where they were related. They were brothers. They often occur at the end of a large family or near the menopause. That this fact plays a very important part in the etiology is doubtful, for they are often the first child and the mother young. Of the twenty-three observed five were from the seventh to the thirteenth child in the family while nine were from the first to the third. In nine cases the mother was from thirty-eight to forty-eight years old and in one instance the father was twenty-four and the mother forty-three. In several instances the child was the youngest in the family by several years. Only two had a specific history and in no case were the parents related before marriage.

The diagnosis of this type of idiocy is very easy. Dr. Hopkins recognized his case from a description I had given him of the class. The only condition for which it is likely to be mistaken is cretinism. They have the following points in common: they are both short in stature, backward in development and dentition, hair straight and scant, have large tongues which protrude, short thick hands, depressed noses and are both lowtyped idiots.

They differ in that the Mongol's palpebral fissures slant, he has reduplicated epicanthic folds, has red cheeks short fingers which taper to a point, back of head straight, while large over vortex, hair fine and silky, has no fat pads and is lively and cheerful in disposition; while the cretins eyes are horizontal, no reduplication of epicanthic folds, cheeks pale, head large behind, hair coarse, fingers square at ends, pads of fat often present and they are often stupid and morose.

Intellectually Mongols are very near the bottom of the scale. They often do not sit alone before a year nor walk until from two to four. Some never learn to recognize the mother.

while others never learn to talk. They are very imitative and like to mimic older persons. They are helpful and like to do errands, taking great pride in their attainments.

Mongols are short lived. Of the twenty-three observed the oldest was eleven, while nineteen were under six. They are sensitive to atmospheric changes and very prone to lung trouble, especially tuberculosis and pneumonia. Those surviving usually become fat at puberty. In such thyroid is useful. Poynton, of London, has seen general improvement in the continued use of it, but the gain must be very slight for one of his cases four years old, that had been under treatment for a year, could barely walk and could say but a single word.

After the report of several very interesting cases the society adjourned to meet January 26, 1905, at Petersburg.

TENT LIFE FOR HEALTH SEEKERS UNDER CHRISTIAN AUSPICES AND SANITARY ENVIRONMENT.

Health Farm of Young Men's Christian Association, Denver, Colorado.

W. H. Watterson, M. D., Associate Medical Director, Edgewater, Colorado, formerly of Chicago:-

For years the pure dry air, stimulation of altitude and penetrating sunshine of Colorado have attracted the consumptive, because these factors invite to outdoor life. The question naturally arises, why do we see so many failures in the cases coming?

Farm Opened May 21, 1903—Nine Tents Occupied.

Firstly, because of the medical directions given.

Secondly, because of the imprudence of the invalid.

Thirdly, because of the lack of the necessary financial aid to enable him to take the proper rest and food with the open air treatment.

We are daily receiving letters from invalids in the lower altitudes, asking us to take them here as patients, and stating that they are unable to work where they are, but are sure they could work here, and thus pay their way. It is for the eastern physician to help us along these lines. A man who cannot work because of weakness in a lower altitude surely must be told that with the increased efforts he must put forth in a higher altitude he cannot work for even a much longer time than he might in a lower altitude. Many of our patients come with the advice from friends, or even their physician, to "rough it," "breathe deeply," "take plenty of exercise," "work on a farm," "ranch it," or anything but rest. Reaching Denver, they attire themselves as cowboys, and with broncho saddle and spurs ride out to explore the unknown regions of the Rockies, or even see the Pacific, in the least possible time. Again, they may reach Denver having spent their last cent on their railway fare, and are compelled to work when rest is most essential. These things have been going on for many years, until Dr. B. P. Anderson of Colorado Springs, who has watched these cases for some time, makes this bold assertion:

"I have seen, during my residence in Colorado, very nearly as many cases of phthisis which we would designate curable fail of recovery simply from imprudence in the mode of exercise, and indiscretion in the manner of living, as those cases of extensive lesion which render recovery absolutely impossible, and which are termed incurable."

So many phthisical young men come into the rooms of the Y. M. C. A. at Denver that they were referred to by the business men as "Denver's burden." What could the Association advise other than to go to rooms and boarding places in Denver—a city I consider most dangerous for a consumptive to inhabit because, firstly, it is a city, dusty and smoky, as are other cities, there being even less wind than in lower altitudes. Secondly, a large percentage of the inhabitants are consumptives, who expectorate where they please, thus making it a most suitable place for re-infection. Thirdly, association with the many hopeless cases is conducive to mental depression.

Fourthly, the saloons, houses of ill fame and such places make these men most welcome as long as their money lasts.

With these facts and problems at hand, the Young Men's Christian Association, assisted by the business men of Denver, tried to help to handle "Denver's burden." A most philanthropic gentleman gave to the Association a beautiful farm five miles north-west of Denver ,and on this the Association built the "White City," and started the open air treatment of tuberculosis, as their part in dealing with these young men.

The farm is on a plateau overlooking Denver, and has 100 miles of the Rockies in view. There are thirty-three acres of orchard and garden, all of which is under irrigation, except about the tents, and is hedged by rows of high trees on the north and west, which give protection not only to the fine orchard, but also to the tents. Drinking and bathing water is supplied from a 60 feet deep artesian well. There are now forty-five tents in service, and more could be filled were it not for the limited dining room. Various types of tents were tried, until the following described tent was found most efficient, and is now adopted:

The frame is made of selected Oregon surfaced lumber. The four sides of the tent are boarded up thirty-two inches with three-quarter inch Mexican clear drop-siding, while the floor is made of Texas quarter-sawed pine. A four panel door (special hand-made screen door), and two six-light windows are provided with each tent. All window openings and ventilating apparatus are covered with fly wire screening, which, together with the screen door, makes the tent insect proof. The fly extends one foot over edges of the tent, is ten inches above the parallel to the roof, thus allowing free circulation of the air all over the roof of the tent. The fly is finished on the edge with a six-inch scalloped and bound curtain, which gives a beautiful and uniform exterior to the tent. The special features consist in the hygienic ventilation: first, by means of the cupola or combination roof and fly ventilator, with regulator attachments, placed in the center of the top of the tent. Second, by means of two awning frames, which make up the front wall of the tent, and which may be raised at various angles as awnings, or removed entirely, which, together with the screen door, makes it possible to sun out the south or front side of the tent in a perfect manner. Third, by means of the side wall ventilation, six inches above the floor, consisting of a hinged width of the drop-siding opening downward, while in a corresponding position on the inside wall of the tent another wider board is hinged downward, but so regulated as to be opened at any desired angle, thus at once controlling the inlet of fresh air. By means of this series of ventilation the tent is hygienically constructed, for no draughts are encountered, and the problem is solved of removing at once, through the roof and fly ventilator, the vitiated air as it comes from the occupant, while the pure air constantly enters at the bottom of the tent. All canvas used is twelve ounce army duck.

A man wishing to become a resident at the Farm applies through the Denver Y. M. C. A. His application must be accompanied by a physician's certificate as to his condition.

Water Tower Observatory Finished September 1, 1903—Thirty Tents Occupied.

From this we advise, whether or not to come to Denver. If advised to come, he is asked to report at Y. M. C. A. on his arrival. He is then sent to the examining physician, who passes on his condition and decides whether he is a fit patient for the Health Farm, only incipient cases being taken. If reported a favorable case to live at the Farm, he is put on the waiting list, and in turn of vacancies of tents is received. On arriving at the Farm, one of the resident physicians takes the patient in hand, and emphatically impresses on his mind the following laws and advices:

1. Makes a business of getting well while here. If you have some other business, not only the business but your health will fail.

2. Expectorating anywhere on or near the grounds, or anywhere other than in the sputum cups furnished, is a cause for immediate expulsion, this because infection occurs through the sputum, especially when voided by a consumptive upon the floor, ground or handkerchief, where it dries and becomes disseminated as dust, and is again re-inhaled, infecting the undiseased lung or part of lung.

3. That rest is as essential to the healing

of a wounded lung as to any wound on any part of the body, and that even deep breathing should be abandoned and the cough suppressed as much as possible.

4. Comparative rest should be observed until all organs over-stimulated by the high altitude compensate.

5. One must be in the open air all the time. Sleeping in a tent with doors, ventilators and windows open is the best, and one will not catch cold if properly clothed.

6. One should not even be in his tent on fine days, but be out on the lawns in chairs, and in the sunshine when it is not too hot, as in July and August.

7. Stripping to the waist, and taking a sun bath, followed by a rub down, is good to harden one.

8. The least amount of artificial heat in the tents the better, but make up by sunshine and plenty of clothing.

9. Bathing and other hygienic life is important.

Each patient is required to attend to his own tent and bed, except so far as scrubbing and disinfecting are concerned. On a tent being vacated, it is well cleaned, bedding and rugs sterilized and tent closed up tightly and fumigated with formaldehyde, after which it is opened, well aired and sunned before being occupied again. All the tents are lighted by electricity, and the Assembly Tent, as well as five infirmary tents and two floors of the Observation Tower, are heated by steam. The other tents are not heated, the patients making up by plenty of bedding, tact in dressing and undressing, and a hot brick on retiring. We find our men cough least and improve most during the winter months. Our dining room in the brick structure seats 45. It is heated by steam, but has a fire-place, and is well ventilated. However, the heat of this room is never above 65 Fahr. Our diet is of all ordinary food, with plenty of milk, cream, fresh eggs and good meat. Fruit is in abundance, winter and summer. We have not as yet had to advise our patients to eat plenty; rather have we had to recommend them to curb their appetites after the first few days here, and for the following month or two. Three meals a day are served, but any patient so desiring may have milk or raw eggs between meals. Of course we must diet some cases. Rest or exercise depend on the following:

1. Temperature. Complete rest in bed when 100 F.

2. Pulse. Complete rest in bed when high.

3. Hemorrhages. Complete rest in bed for a week to ten days.

4. Weight. Comparative rest until weight begins to increase, then very gradually, allowing more exercise, and watching results.

5. Graduated exercise after weight has reached normal, and other symptoms quieting.

As to the kind of exercise, we find walking most satisfactory. Box ball is also indulged in without apparent injury, and light farm work is done by many of the patients.

Those who feel the life in one camp monotonous are sent to another camp for a time. We have found the change very helpful, and a case not improving here often picks up in weight thereby.

There is free telephone communication with Denver, and the street cars run one and three-quarter miles from the camp. However, trips to Denver by residents are discouraged.

May 21, 1904.—Forty-two Tents Occupied.

I tabulate below some facts as to our results, which are based on a record of those spending at least one month on the Farm:

Number of patients admitted to Farm since its opening, May 1, 1903	146
Number of men who have left and subsequently returned	8
Number of residents now here	43
Number of men who have left to take up positions	41
Number we know are still working	47
Number lost track of	3
Number sent home in good condition	12
Number sent home in bad condition	7
Number left to reside with friends	2
Number left to winter in warmer climate	2
Number left to live in town	16
Number left for our camp at Crestone, Colorado	18
Number dismissed for insubordination	2
Number sent to hospital	5
Number who died	4
Number now working on Farm	10

86% of the men were benefited.

25% of the men on Farm make their expenses or more.

16% were sent to our camp at Crestone, where they can make part of their expenses.

Of the last 70 patients to come here, five were physicians, two medical students and one dentist, thus making about 6% of the medical profession.

I will describe my own case, because it is typical of those coming here. I came to Colorado last June, having been losing weight for the previous four months at the rate of five pounds per month. In May, tubercle bacilli were found in my sputum. On arriving at the Health Farm on June 25th, my weight was 131 pounds. I very easily became tired and breathless, and had an evening temperature ranging from 101 to 103. I was compelled to remain in bed most of the time for three weeks, during which time my pulse went up to 140 on the least exertion, and there was some weakening of the right heart, and as a result some pulmonary congestion. However, my appetite was good, and I gained at the rate of 2 pounds per week. At the end of three days night sweats, which had been persisting for over a month, stopped, the temperature decreased slowly. My appetite grew from the time I arrived. I ate plenty of wholesome food, but no raw eggs (though I took a few soft boiled ones), and from 2 to 3 quarts of milk daily. At the end of sixweeks I had gained 10 pounds, and felt so well that I insisted on taking some exercise, and accordingly went to work in the garden for two hours on two consecutive mornings. The result was a set-back, loss of four pounds in weight, return of temperature, and also loss of strength. It took me six or more weeks to regain this loss. Since then I have been gaining steadily, till I now have my normal weight of 151 pounds. I am gradually taking more exercise, and find it does not hurt me. My cough is very slight now, and I anticipate clinical recovery by Spring. My case is but a fair sample of all others here.

To sum up, it will be seen that our camp is not a sanitarium or hospital, but a place where the consumptive is trained to care for himself, so that he may be again a breadwinner. While training him along those lines it is our aim to build up his system and vitality, so that he may have a good start when he goes out again to earn his living.

Marriages and Deaths.

Marriages.

Edward Jenner Barrett, M. D., Chicago, to Miss Julia Dennett, of Sheboyban, Wis., Jan. 11.

Lynn Moore Barnes, M. D., to Miss Donna Ullery Buckingham, both of Decatur, Ill., Jan. 10.

Geo. S. Edmonson, M. D., of Clinton, and Miss Della Jones, of Thawville, January 4.

John K. Jamison, M. D., Chicago, to Miss Ethel Gibson, Waukesha, Wis., January 19.

F. C. Knight, M. D., Waukegan, to Mrs. Mary Holman, Chicago, January 25.

Deaths.

Herrman, Christian A., Chicago, January 22, aged 59 years, a graduate of Hahnemann Medical College of Chicago, 1894.

Bird, A. M., Mason City, January 25, aged 62. Dr. Bird had practiced medicine in Mason City for 30 years. His death was due to paralysis.

Diffenbacher, P. L., M. D., Havana, Jan. 29, aged 78. Dr. Diffenbacher was a veteran of the Civil war and a prominent practitioner of Havana for forty years. He was President of the Mason County Medical Society at the time of his death.

Haynes, Thomas Baxter, Hurricane, Montgomery County, Jan. 28, aged 78. Dr. Haynes was President of the County Society at the time of his death.

Bernreuter, E. D., M. D., Mt. Olive, Dev. 9, aged 46.

Blinn, Odelia, M. D., Chicago, Jan. 20, aged 60.

Norred, Chas. H., M. D., Minneapolis, formerly of Lincoln, Ill., Jan. 11, aged 62.

Johns, Dr. T. M., Taylorville, Jan. 12, age 50. Dr. Johns graduated from Rush Medical College in 1877, and had practiced in Taylorville since 1877. He leaves a wife and five children.

Ensminger, Dr. Wm. H., Chicago, died suddenly of apoplexy, Jan. 17, at his residence, 4801 Champlain avenue. His age was 62. He was a veteran of the Civil war, a Knight Templar and a thirty-second degree Mason.

McFarland, Dr. Geo. C., Jacksonville, Jan. 15, age 65. He was born in Concord, N. H., and was a son of Dr. Andrew McFarland, for many years superintendent of the Central Insane Hospital, and later founder of Oak Lawn Retreat.

Hunter, Warren, M. D., Medical School of Maine, at Bowdoin College, Brunswick, 1860, physician of Rock Island County for six years, assistant surgeon of the One Hundred and Sixteenth Maine Volunteer Infantry during the Civil War, died at his home in Oneida, Ill., Jan. 6, from uremia, aged 72.

Harris, Joanis Orlando, M. D., Geneva, N. Y. Medical College, 1851, assistant surgeon of the Fifty-third and One Hundred and Thirty-eighth Illinois Volunteer Infantry in the Civil War, died at his home in Ottawa, Ill., Jan. 10, from pneumonia, after an illness of one day, aged 76.

Anderson, Axel M., M. D., Cincinnati, 1899, of Erie, Pa., died recently in Chicago, and was buried in Jamestown, N. Y., Dec. 28.

Matthew, Levi, M. D., College of Physicians and Surgeons of Chicago, 1883, who recently moved to Chicago from St. Anne, Ill., died at his home from paralysis, Dec. 11, after an illness of a year, aged 54.

Penwell, Enos, M. D., Indiana Medical College, La Porte, Ind., 1848, for more than half a century a practitioner of Shelbyville, Ill., died at his home in that city, Dec. 24, aged 83.

Beebe, Ellen O., M. D., Illinois, 1879, was found dead in her apartments in Chicago, Dec. 30, from exposure, aged 55.

New Incorporations.

The Secretary of State at Springfield has granted licenses to corporations as follows:

Continental Sick Benefit and Burial association, Chicago; benevolent; incorporators, James B. Collins, A. J. Russell, Oscar E. Florin.

The Chicago Sanitary Street Flushing Machine company, Chicago; capital, $100,000; clean streets; incorporators, Christopher Murphy, A. J. Fisher, and Thomas S. Hogan.

Bethlehem Creche, Chicago; charitable; incorporators, Mary Wells Noyes, Mrs. J. Burnett and Jennie G. Heath.

National Curative association, Chicago, operate a sanitarium; B. W. Willard, V. R. Bucklin.

The Polyclinic Society of Chicago; educational; incorporators, David Beaton, Jean Sherwood, Mary Holabird.

News Items.

G. A. Harper, Called Into a Justice Court Severely Criticises Attorney Warwick A. Shaw.

G. A. Harper of the Harper Remedy company, 167 Dearborn street, Chicago, said things recently about Warwick A. Shaw, attorney for the State Board of Health, because the lawyer had caused him to be summoned before Justice Cochrane, charged with practicing medicine without a license.

"It's all a mistake," said the attorney, when he saw Harper. "You are all right. The constable must have got the wrong man. The case is dismissed."

That didn't satisfy Harper. He objected to being summoned with unlicensed physicians and charged the lawyer with being actuated by mercenary motives. Shaw said he was sorry, and let it go at that.

Harper said it was not the first time he had been bothered by Shaw. He said he was prosecuted in 1902 by the state board's attorney on a similar charge. "On that occasion," he says, "I did not appear before the justice and a judgment of $100 was entered against me. Attorney Shaw settled with me for $30 and I have receipts to show for it."

"We frequently settle such cases," explained Shaw. "The fine ranges from $25 to $100 and we are allowed by the law to use our discretion." —Chicago Tribune.

(The name of G. A. Harper does not appear in the latest register issued by the State Board of Health.—Ed.)

Dr. A. J. Ochsner, chief surgeon of the Augustina and St. Mary's hospitals, Chicago and Meyer T. Sturm, an architect of 84 LaSalle St., Chicago, has been awarded the first prize, a gold medal, for plans exhibited at the St. Louis exposition. The exhibit consisted of plans for a hospital for the treatment of contagious diseases, a hospital for towns, a hospital for cities, and a gynecological and obstetrical hospital. The hospital for contagious diseases departs radically from the old style pavilion plan, and treats all diseases in one building by a unique floor arrangement.

Millions In It.

If that Philadelphia boy on whom the doctors have grafted a rabbit's eye could just find a clever performer with a harelip they would make a great team of headliners for the Belgian circuit.—Indianapolis News.

Dr. Albert Dollear of Jacksonville, has been appointed county physician of Morgan County.

Dr. Matthew Wilson of Evanston has announced his engagement to Miss Flora Freedman of Mendota.

Dr. Bayard Holmes of Chicago addressed the Teachers Association of Illinois at their annual meeting at Springfield on the physiology of play. He divided his subject into spontaneous and organized play. He defined play in its broadest sense to be any activity designed for the immediate happiness of the actor. Many interesting points were given by the speaker.

STATE WAR ON PHTHISIS.

The Illinois State Association for the Prevention of Tuberculosis was organized permanently January 19, in the Public Library building, Chicago, marking the beginning of a new era in the fighting of the disease.

The general object of the association is "to prevent the prevalence of consumption and other forms of tuberculosis in Illinois." Two specific objects, while they are not named in the constitution of the organization, are admittedly in the minds of those who are most prominently affiliated—to obtain from the legislature an appropriation of $250,000 with which to build a state sanitarium, and the enactment of a law compelling the registration of all tuberculosis sufferers in the state.

Officers were elected as follows:

Honorary president—The Governor of Illinois.

President—Edmund Janes James, president of the University of Illinois.

Treasurer—James H. Eckels.

Secretary—Dr. Arnold C. Klebs.

Legal adviser—Charles H. Hamill.

Executive committee—E. P. Bicknell, Dr. William E. Quine, Sherman C. Kingsley, Dr. J. W. Pettit, and Dr. George W. Webster.

Central committee—Dr. William E. Quine, Dr. Frank Billings, Dr. N. S. Davis, E. P. Bicknell, Dr. Josephine Milligan, Jacksonville; Dr. N. B. Delamater, Dr. N. H. Graves, Dr. George W. Webster, Dr. W. A. Evans, and Dr. Robert Babcock.

Any city or county interested in the combating of tuberculosis may be affiliated with the association upon application to the central council. The dues are $1 annually.

The organization of the association was inspired by the Visiting Nurses' association, under the direction of Dr. A. C. Klebs. A meeting of representatives of the various medical and philanthropic societies of the State was held a month ago at the Great Northern hotel and the committee appointed which drew up the constitution and bylaws accepted at the meeting last night.

Asks $200,000 For Consumptives.

The Glackin bill, for the establishment of a sanitarium for the treatment of tuberculosis, would appropriate $200,000 for the purchase of a site and the erection of suitable buildings. The intention of the bill is to provide first a home for curable patients, and afterward, either in connection with this proposed institution or at another place, a home for the incurable ones.

Imagines They're Shooting.

Quincy, Ill., Jan. 14.—Dr. Arthur H. Byers, late of New Salem, Ill., was taken into custody yesterday, suffering from nervous trouble. He believes his enemies are trying to kill him, and yesterday morning fired two shots at imaginary persons.

Dr. Wade S. Stevens of Dixon has been convicted of the charge of murder of Alma Barnhart, and sentenced to the penitentiary with an indeterminate penalty.

Passavant Memorial Hospital, Chicago is to be aided by an auxiliary board whose object is to help the board in control of the hospital in the work of enlarging the institution. The following officers will serve:

President—James H. Eckels.
Treasurer—Arthur L. Farwell.
Secretary—Arthur B. Wells.

The first official act of the board was to accept the gift of the house and twenty-five foot lot adjacent to the hospital, which was offered by O. B. Green. It is intended to use the house, in part, as a residence for the nurses.

Dr. Hobbs' Hubby.

Mrs. Lillian R. Hobbs, said to be an M. D. by the Chicago lay press, liivng at 224 Thirty-first street, enumerates many acts of cruelty in her bill for divorce from Frederick James Hobbs, filed yesterday. She charges in addition she paid the house rent for ten years and bought the furniture as well. In March of last year, she says Hobbs struck her and choked her, breaking her teeth and her eyeglasses. Dr. Hobbs lists her other charges against her husband thus:

Beating her,
Striking her,
Kicking her,
Choking her,
Calling her names,
Throwing her down,
Nonsupport.

Her name is not found in any medical register.

Representative Frank Heinl, of Morgan County, has introduced into the House of the 44th General Assembly a bill requiring an examination of school teachers. This is aimed primarily at Tuberculosis, but covers the entire field of contagious and infectious diseases. The number of the bill is 141, the text of the amendment is in bold face type:

"A bill, for an act to amend Section 5, Article VII, of 'An Act to establish and maintain a system of free schools,' approved and in force May 21, 1889.

"Section 1. **Be it enacted by the People of the State of Illinois, represented in the General Assembly:**. That Section 5, Article VII, of an act entitled, 'An act to establish and maintain a system of free schools,' approved and in force May 21, 1889, be amended so as to read as follows:

"Section 5. Teachers, Qualification—when pay allowed. No teacher shall be entitled to any portion of the common school or township fund, or other public fund, or be employed to teaches school under the provisions of this act who shall not at the time he enters upon his duties as such teacher have a certificate of qualification obtained under the provisions of this act from the Superintendent of the State, or the county superintendent of the county in which the school is located entitling him to teach, **and also a certificate from some regularly licensed, practicing physician of the county, showing that he is not suffering from any communicable contagious or infectious disease which said certificate shall be the result of an examination made within thirty days of the beginning of his duties as such teacher."**

O. E. Miller's Latest Adventures.

Dr. O. E. Miller, owner and manager of Ruskin "University," and reputed proprietor and head physician of a sanitarium for the cure of inebriates and drug victims, has been ejected from the village of Glen Ellyn. He appeared before Justice H. F. Higley, recently, to answer charges brought against him by the village board of running an institution in violation of the village ordinance. He pleaded guilty and was fined $100 and given ten days in which to close the affairs of the "university" and leave the place. Miller says he will go.

The action is the result of a feeling of dissatisfaction that has been felt among the residents of Glen Ellyn since Dr. Miller first purchased the building of the defunct Ruskin university several months ago. Under the guise of a "university," it is charged, he conducted a sanitarium.

Neighbors declared that screams were heard in the old university building at late hours, and closed carriages arriving in the night made women and children afraid to pass the place after dark. Shortly after taking charge of the institution a young woman "student" escaped while undegoing treatment, and was killed by an express train.

The village law which was violated reads as follows: "No sanitarium shall be permitted within the corporate limits of the village with-

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Prevents formation of uric acid accumulations and dissolves concretions in their incipiency.

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out a license." Evidence of the violation was secured from "students" at the institution.

Since establishing himself in Glen Ellyn, Dr. Miller has had several clashes with the authorities. Last summer, one of his professors entered a claim for damages against Mayor O. D. Dodge for injuries received when the latter forcibly ejected him from the council room. Dr. Hall, one of the faculty of the sanitarium, left for Chicago today with his family.

The officers of Ruskin "university" were: O. E. Miller, president; George McKay Miller, dean; and H. T. Miller, secretary and treasurer.

The Chicago Baptist Hospital has become the owner of the property it has long occupied at the southwest corner of Rhodes avenue and Thirty-fourth street, paying for the same $37,500. To secure $25,000 of the purchase money, it gave a trust deed to Frank J. Llewellyn for five years at 5 per cent. The ground is 214 by 164½ feet and the building is a three story and basement seructure.

The City of Berlin has offered three prizes for the best plans for a monument to the late Prof. Virchow.

The air in Chicago, according to Dr. Arnold C. Klebs, is healthful. Kipling's declaration that the city is a place where "they breathe dirt," was qualified yesterday in a lecture before the Woman's Club at the Northwestern University Settlement House, at Augusta and Noble streets.

"Coal miners," declared Dr. Klebs, "so far as tuberculosis is concerned, are the healthiest people in the world. There appears to be something invigorating in the coal dust they breathe. According to this, Chicago should be an ideal place for a tuberculosis patient. We have plenty of coal dust here."

That it was not necessary for the person suffering with the "white plague" to go to Colorado was made clear by a succession of stereopticon slides, representing persons sleeping on housetops and verandas. "The tops of the tenement houses and the apartment buildings," the lecturer declared, "could be made into sanitariums at no expense."

Dr. Klebs, who, with his lecture inaugurated the work of the newly organized State Society for the Prevention of Tuberculosis, also told his audience that it was indoor life and whisky that caused most of the consumption in the United States.

His Worst Fears Confirmed.

Finding himself standing in front of a doctor's office, Tuffold Knutt yielded to a sudden impulse and stepped inside.

"Doc," he said, "kin a man git sick by jist breathin' a unwholesome atmosphere?"

"He can," answered the doctor. "I shall be obliged, my friend, if you will improve the atmosphere of this office by getting out of here in just three seconds. One—two—"

But Tuffold Knutt was on the outside.—Chicago Tribune.

Enormous Increase in Drug Victims.

Supt. Sloan of the bridewell, Chicago, reports a great increase in drug victims coming under his care. In 1903 they numbered 309. In 1904 the number grew to 970. Cocaine, morphine, opium, paregoric, codeine, and other victims filled the cells. Many were women, and most blamed physicians, who prescribed the drugs to them in illness.

Dr. Cale W. Coe of Stonington is practicing in New Mexico where he was obliged to go for his health. He is much better.

Dr. Geo. E. Clements of Springfield has gone to Crawfordsville, Indiana.

Dr. C. B. Ripley of Alliance, Neb., has been transferred to Galesburg, Ill.

Dr. Chas. W. Sly has moved from Verona to Benson, Woodford County.

Dr. O. N. Carr has moved from Kewanee to Verona, Grundy County.

Dr. Frank Billings of Chicago, accompanied by his daughter and sister has gone to Honolulu on a vacation trip.

Dr. A. B. Cary of Donnellson has gone to Florida for the winter.

Dr. A. C. Jackson of Heaton has moved to Tower Hill.

Dr. Robert N. Canady of Irving has moved to Litchfield.

Dr. N. H. Boone of Chandlerville is seriously ill.

Dr. H. D. Rothgeb has removed from East Lynn to Gibson City.

Dr. Saml. Bane has moved from Ellsworth, McLean County, to Peoria, and has taken an office at 325 Masonic Temple.

FOR SALE—A village and country practice of $2,000.00 to $2,500.00 in McLean County, Illinois. Complete office and driving outfit and thorough introduction for $800.00. Address A. R. P., care of Journal.

TO RENT—Office hours in the Columbus Memorial Building. Inquire of Dr. J. R. Pennington, suite 1101, Chicago.

FOR SALE—Residence, office furniture, etc., in one of the most prosperous communities in Illinois. Owner is obliged to leave for California on account of illness of wife. Address T. W. W. care Ills. Med. Journal.

LOCATION—In a first class rural community in Indiana near the Illinois line; good farming community, graveled roads, etc. Address S. N. S., care Ills. Med. Journal.

FOR SALE—One 12-inch Ruhmkorffcoil for X-Ray work, Western Electric Co's make. All complete and in good shape; cheap. Address N. K. care Ills. Med. Journal.

The Illinois Medical Journal.

EDITORIAL OFFICE, 522 CAPITOL AVENUE, SPRINGFIELD.

Copy for advertisements must reach the editor's office by the 20th of the month in order to secure insertion.

PUBLISHER'S NOTES.

The Journal is not responsible for any medical or therapeutical views expressed in this department.

Treatment of Genito-Urinary Troubles.—Cystitis being the most frequent of the chronic inflammations of the urinary tract, we may take it as an example for consideration. My experience with hundreds of these cases taught me to always examine the urine closely. From a therapeutic standpoint, we are not interested so much as to just where the irritation is located as we are in what will cure the patient. In these cases I have prescribed cystogen, which has a direct action upon the mucous membrane of the genito-urinary tract. Formaldehyde is liberated in the urine, and the whole tract, from the glomerulus of the kidney to the meatus, is bathed with a solution of formaldehyde, thus preventing the formation of pus, allaying irritation and overcoming decomposition. Cystogen aperient was prescribed in many cases. This is an effervescent salt of cystogen, containing phosphate of soda, and its administration was followed by marked improvement in all cases. Cystogen aperient should be prescribed when a laxative is desired in connection with the therapeutic effect of the drug.—(Brose S. Horn, M. D., in Charlotte Medical Journal.

In the British Medical Journal, Dec. 2, 1904, **Arthur E. Barker,** F. R. C. S., Prof. of Surgery, University College, London, published a second paper on beta-eucain and adrenalin in infiltration anesthesia. The technic is that previously described; but he has modified his solution to the following: Distilled water, 3½ ozs.; beta-eucain, 3 grains; sodium chloride, 12 grains; 1:1000 adrenalin solution, 10 minims. The whole quantity can be used in an ordinary case, if necessary, and is quite sufficient for most. But he has often injected twice as much when large areas had to be dealt with, and never saw ill results from 6 grains beta-eucain and 20 minims adrenalin. The sodium chloride renders the solution isotonic with the blood, preventing pain from the injection. The adrenalin enhances the duration of the anesthesia; eucain alone anesthetizes only for about 15 minutes, while the combination produces an anesthesia lasting 3 or 4 hours. But it is more slowly produced when adrenalin is also used; and it is therefore well to wait some 30 minutes after injection before all larger operations, to allow insensibility to develop fully.

Barker never saw any depressing effects follow, although in several exceptional cases up to 6 grains eucain were injected. To judge from the reports of those who use cocain for local analgesia, the contrary is the case, and they recommend the subcutaneous injection of strychnin, the use of camphor and other stimulants during operation. They also insist that the patient should be kept quietly in a horizontal position for some hours after operation. With eucain, Barker's patients have taken no harm from walking away from his house, even when it was used freely; and in the hospital no after-treatment was necessary. This appears to be a strong point in favor of eucain, if the anesthesia is in any degree equal to that of cocain. From what he has seen and heard, his method appears to have given better results than cocain, and the fact that all injections can be finished ere operation is begun and need not be repeated, places eucain for long operations far above those in which (Schleich) injection has to be done over and over again in the course of an operation. He finds it difficult to understand after the operations recently performed, why anyone still employs cocain, which is admittedly far more dangerous and cannot yield better results. A list of his last series of 91 operations under eucaine analgesia is appended; among them are 8 abdominal sections, 23 herniae, 5 amputations, 12 varicose veins, 3 thyroid tumors, and 3 orchidectomies.

A Substitutor Convicted.

Kress & Owen vs. Cruttenden.—On the 8th day of December, Police Magistrate Denison, in the Police Court, registered a conviction against Thomas Cruttenden, Jr., who keeps two drug stores in Toronto, one at the corner of Howard and Sherbourne Streets, and the other at the corner of Gerrard and Sumach Streets, for infringement of the trade mark, duly registered in Canada, owned by Kress & Owen Co., 210 Fulton Street, New York, "Glyco-Thymoline." The evidence conclusively showed that the defendant had put up a preparation under the name of "Glyco-Thymol," and with labels worded verbatim et literatim to those of the original manufacturers. The magistrate, in registering the conviction, gave the defendant's solicitor, who hinted at an appeal, to understand that if he entertained that idea he would not only fine but imprison his client as the law provided. The case was adjourned for a week, at the end of which time Cruttenden, through his solicitor, gave an understanding that he would stop all manufacture of Glyco-Thymol and destroy all labels, bottles, etc., connected with the sale of that preparation. The firm of Kress & Owen Co., are deserving of congratulation over the result of this case. They had every reason for prosecuting Cruttenden, as it was nothing short of dishonest and entirely contrary to the law,

that he should stoop to such practices and try to rob the firm who by strictly ethical advertising (solely to the profession) and the expenditure of about $175,000 per annum, have secured a large sale of Glyco-Thymoline, a preparation found valuable in catarrhal conditions of the mucous membrane.—Canadian Journal of Medicine & Surgery, Editorial, January, 1905.

During La Grippe and Afterwards,

the experience of thousands of physicians proves the value of ANGIER'S PETROLEUM EMULSION. It braces the patient, enables him to withstand the ravages of the disease and guarantees him freedom from the subsequent exhaustion and sequelae. ANGIER'S PETROLEUM EMULSION promptly relieves the cough and symptoms of respiratory irritation, palliates the nervous symptoms and hastens convalescence.

Book Notice.

A treatise on Diseases of the Nervous System by L. Harrison Mettler, A. M., M. D., Associate Professor of Neurology, College of Medicine of the University of Illinois, Professor of Mental and Nervous diseases in the Chicago Clinical School, Consulting Neurologist to the Norwegian Deaconess' Home and Hospital, Chicago—complete in one volume, profusely illustrated, Cleveland Press, 1905. Price $5.00.

This massive volume of nearly 1,000 pages with 212 illustrations is a noteworthy production of a careful, practical and industrious neurologist. Its **raison d'etre** arrangement, and methods are so fully described in the preface that we give this in full.

Preface.

The Neurone Doctrine is now an accepted fact. Its teachings have done more to illuminate the dark places of neurology than has any single scientific generalization heretofore promulgated. In spite of the fact that in regard to many of its details much has yet to be learned, the main principles which it lays down are universally acknowledged to be scientifically accurate and practically useful. The present treatise has been written with the view of presenting the subject of neurology in consonance with this doctrine. The diseases are classified, so far as possible, upon that basis. The neuronic structure of the nervous system is given special emphasis. And the role of the neurone in the matter of the pathology and symptomatology of these diseases is kept well in view. The author feels that the time has arrived for the frank recognition of this great doctrine, not merely in histology but also in the greater field of neurology. He is convinced that one cannot acquire a proper conception of modern neurology without an adequate knowledge of the neuronic structure of the nervous system. Mistakes in the diagnosis and blunders in the treatment of diseases of the nervous system can be minimized only by keeping well in mind the facts taught in the neurone theory. If the present volume will enable the student and the practitioner to behold the entire field of neurology—modern neurology—under the brilliant illumination cast upon it by this scientific generalization, the highest wish of the author will have been attained.

The unity of the nervous apparatus and its functions, the author believes, is not today taught as emphatically as it should be. In some quarters the tendency is marked to discuss the nervous system and its diseases in such minute detail that the universal working of the nervous system as a single, uniform, albeit compound organ, seems to have been lost sight of. This is shown particularly in connection with the subject of cerebral localizations. Psychology is a science as well as neurology; and as neurosis underlies psychosis, it is incumbent that a proper conception of modern psychology should be possessed to fully comprehend the nature of the cerebral localizations, the psychic symptoms of nearly all the nervous affections and the entire psychic side of neurology. The author has endeavored to make plain from the standpoint of modern psychology many of the phycho-physical manifestations of the nervous organ.

In the presentation of the individual diseases their diagnosis and pathology have been especially dwelt upon, the writer being of the firm opinion that treatment and general therapeutics are absolutely valueless sometimes positively dangerous—in the absence of a correct or approximatly correct diagnosis. Neurology's hardest problems are in the diagnostic sphere. Given a correct diagnosis, the treatment is generally a very simple affair. Diagnosis and pathology rest upon anatomy and physiology hence much space has been given to normal as well as abnormal neurology in the following work.

The proper classification of some nervous affections is still a matter of uncertainty. One has but to recall such troubles as the myopathies, the periodical paralyses, Landry's paralysis, certain types of polyneuritis, exophthalmic goitre, progressive facial hemiatrophy, myasthenia gravis, Bell's mania, disseminate sclerosis, hypertrophic pachymeningitis and many others. The author has classified them in accordance with his own view and with what he believes to be the general view among the best authorities.

Those of us practicing in the North should bear in mind that away down South in Dixie there are many delightful places to which convalescent and invalid patients may be sent with great advantage. For example, no place in the United States possesses a more invigorating and healthful atmosphere in winter than does Biloxi, Miss., which is situated about midway between New Orleans and Mobile, right on the shores of the Gulf of Mexico. Especially is Biloxi an admirable point to which a patient may be sent, for the reason that there is at this place one of the most attractive and thoroughly equipped institutions in the whole country for the care of just that particular class of patients. We are told that in this admirable institution is an elaborate system of baths, including hot sea baths at all seasons, which is splendid at all times, but especially so in winter.